From: Bill jennings <deltakeep@me.com>
Sent: Tuesday, August 14, 2012 7:33 PM
To: Gowdy, Mark@Waterboards
Subject: As Promised: Comments on Public Trust and Benefit/Cost
Attachments: EWC, DeltaPlan ReducedFinal.pdf; CSPA, C-WIN, AquAlliance, and PCFFA Delta Plan DEIR Jackson.pdf

Hi Mark: As always, I enjoyed our discussion. As promised, attached are two documents submitted to the Delta Stewardship Council.

First are the comments of the Environmental Water Caucus on the Fifth Draft of the Delta Plan. Pages 7-10 discuss the public trust and benefit/cost analyses and Attachment I contains a sampling of resources for economic benefit/cost analysis. You also might find Chapter 6 on page 28 regarding water quality interesting.

Second, are the comments by CSPA, C-WIN, AquAlliance and PCFFA on the draft EIR of the Delta Plan. Pages 3-4 discuss the public trust and pages 7-12 addresses required benefit/cost analyses. We actually had four sets of attorneys commenting on the DEIR and if you add comments from Delta water agencies and other environmental groups, there were 11 sets of attorneys submitting comments. I suspect that you can expect the same for the FED in Phase 1.

Let me know if you have questions. Cheers!

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COALITION OF ENVIRONMENTAL, ENVIRONMENTAL JUSTICE, TRIBAL AND FISHING ORGANIZATIONS' COMMENTS ON THE FIFTH STAFF DRAFT OF THE DELTA PLAN

September 30, 2011

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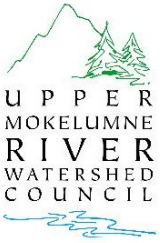

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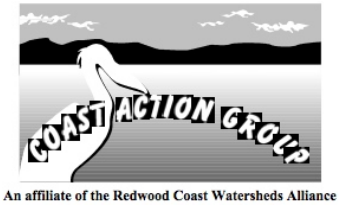

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COALITION OF ENVIRONMENTAL, ENVIRONMENTAL JUSTICE AND FISHING ORGANIZATIONS

To: Joe Grindstaff, Executive Officer
Delta Stewardship Council

From: Coalition of Environmental, Environmental Justice and Fishing Organizations

Subject: Comments on the Fifth Staff Draft of the Delta Plan

September 30, 2011

Our coalition of more than 200 organizations is pleased to provide comments as you continue the development of the Delta Plan and we look forward to your ongoing development of the Plan. We continue to be impressed with your work processes and transparency, which are raising the bar for public agencies.

At the same time, we have serious misgivings about the overall direction of the plan, especially as regards the balancing of the Public Trust, and we have recommendations for actions that are needed by the Council to arrive at a completed and legal Delta Plan. As required by Water Code §85203: "[t]he longstanding constitutional principle of reasonable use and the public trust doctrine shall be the foundation of state water management policy and are particularly important and applicable to the Delta."

Thirty plus years of failure by state and federal agencies to protect the Delta and balance competing demands for limited water resources led the State Legislature to enact the Delta Reform Act of 2009 (Act). The Act created and directed the Delta Stewardship Council (Council) to develop a legally enforceable Delta Plan to achieve the coequal goals of "providing a more reliable water supply for California" and "protecting, restoring, and enhancing the Delta ecosystem" in a manner that "protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." The Act also established a state policy of promoting regional self-reliance and reduced reliance on the Delta in meeting California's future water supply needs.

The Delta Plan functions as a strategic document providing guidance and recommendations to cities, counties, and State, federal, and local agencies on how to restore the Delta ecosystem and provide a more reliable water supply for California. It contains regulatory policies and establishes a certification process for proposed projects to comply with the Delta Plan and envisions incorporation of other "completed" plans into the Delta Plan. In other words, the Council must "certify" that proposed plans, projects, and covered actions are consistent with the Delta Plan.

The California Supreme Court, in the Mono Lake decision, explicitly set forth the state's "affirmative duty to take the public trust into account in the planning and allocation of water resources and to protect public trust uses whenever feasible." The Council clearly has trustee

responsibilities in balancing the public trust. Planning and allocation of limited and oversubscribed resources implies analysis and balancing of competing demands. Inexplicably, we find little effort to balance the public trust obligations and resolve competing demands within the Fifth Draft of the Delta Plan.

Failure to define and quantify the coequal goals is undermining the Council's best efforts. It is not clear what is meant by: a more reliable water supply; protecting, restoring, and enhancing the Delta ecosystem; enhancement of the Delta as an evolving place; regional self-reliance; and reduced dependence on the Delta. For example, reliably receiving full contracted quantities or receiving the present level of water deliveries is considerably different than reliably receiving water after the public trust has been balanced and the Delta ecosystem protected. What are the yardsticks by which success will be documented? Failure to define "getting well together" was the genesis of the CalFed debacle and resolving California's continuing water crisis is unlikely without definition and quantification of these terms.

The inescapable reality is that consumptive water rights issued by the State Water Resources Control Board (State Board) exceed unimpaired flow into the Delta and contracts for state and federal project water are far greater than available supplies. Increased pollutant mass loading to the estuary has exhausted assimilative capacity and exacerbated water quality degradation. Ever-increasing diversion of water has led to the collapse of estuary's biological tapestry. These actions have injured beneficial uses and degraded public trust resources. Two recent state agency reports, developed through extensive public processes, conclusively establish that an increase in Delta outflow is necessary to protect and restore the estuary's aquatic ecosystem .[1]

California's water system is seriously oversubscribed, operating in deficit, and incapable of meeting competing demands on the system. The Council's charge is to resolve this imbalance. In the near term, it's largely a zero sum game. More water to protect public trust values translates to less water for consumption values. Over the longer term, redefining the CVP and SWP to reflect legally available water supplies, improved efficiencies, conservation, reclamation, reuse and improved storage and diversion methods can significantly alleviate, but likely not completely eliminate water shortages. The Council cannot evade having to make difficult decisions regarding the distribution of limited water resources. Sadly, the Fifth Draft of the Delta Plan embraces the status quo and fails to provide the structure and information critically necessary to make intelligent, but painful decisions.

Economics is the science of choice and the study of the allocation of scarce resources among competing demands. Water is scarce in California. Consequently, any process that involves water allocation and protection of biophysical (instream) or in-Delta use values needs to consider the economic value of the public trust and the economic consequences of potential choices or alternatives – i.e., the balancing of the public trust and competing municipal, industrial and agricultural beneficial uses. As a state agency with public trust responsibilities, the Council is required to balance the public trust in both the Delta Plan and Environmental Impact Report (EIR). This requirement to balance the public trust is also intrinsic to other agencies in other and

[1] State Water Resource Control Board. August 2010. *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*; California Department of Fish and Game. November 2010. *Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta.*

future proceedings, including; the State Board's current San Joaquin Flow and South Delta Salinity proceeding and equivalent EIR, their anticipated Bay-Delta water rights proceeding and the Bay Delta Conservation Plan's (BDCP) Habitat Conservation Plan and EIR.

The Mono Lake proceeding was a classic public policy proceeding of allocating a scarce resource among competing demands. It identified the ecological uses of trust resources and their biological requirements, examined the relationship between water flows and impacts on ecological uses and compared the costs to the City of Los Angeles acquiring water from other sources with the economic benefits of protecting the ecological values of the lake's public-trust resources.[2] The City claimed that the costs of alternatives to diverting water from the lake were prohibitive. However, comprehensive economic analysis demonstrated that the economic benefits of protecting the ecological uses of the Mono Lake's public trust resources were more than 47 times greater than the costs to Los Angeles.[3] The State Board considered other factors along with economic results in reaching a decision, but economic factors played a significant and pivotal role.

One of the significant flaws of previous and unsuccessful Bay-Delta proceedings has been the absence of a comprehensive economic evaluation of the benefits of protecting the estuary and in-Delta beneficial uses compared to the benefits of diverting and exporting water from the estuary. This absence has deprived decision makers and the public of critical information fundamental to reaching informed and difficult decisions on balancing competing demands.

The Fifth Draft Delta Plan is bereft of any economic analysis of public trust values. The current draft of the Delta Protection Commission's *Economic Sustainability Plan for the Delta*, which is scheduled to be completed 22 September 2011, only addresses potential economic **impacts** from several conceptual alternatives on Delta agriculture, recreation, infrastructure, and local economies. It excludes impacts to the commercial and subsistence fishing communities and the intrinsic ecological value of the Delta as an ecosystem. It ignores water quality impacts, other than agriculture. It fails to address the **value** of public trust resources, including the economic significance and the contingent valuation of fisheries, natural resources, and associated ecosystem services. Nor does it address the relative economic value of the uses to which water is applied. In short, it is a partial but wholly inadequate initial step to providing the comprehensive economic analysis necessary for the Council to balance the public trust.

The State Water Contractors recently presented BDCP with a report claiming that a peripheral canal would create about 7 to10 jobs for every million dollars spent on construction or operation. However, published estimates of jobs created by investment in water/energy efficiency projects range from 15 to 22 jobs per million dollars of direct investment, with the added benefit of enormous water savings. Furthermore, a full socio-economic analysis would likely demonstrate

[2] Koehler, C.J. 1995. "Water Rights and the Public Trust Doctrine: Resolution of the Mono Lake Controversy." *Ecology Law Quarterly* 22: 451; Casey, E. 1984. "Water Law—Public Trust Doctrine," *Natural Resources Journal* 24: 809-825.

[3] Loomis, J. 1987. "Balancing Public Trust Resources of Mono Lake and Los Angeles' Water Right: An Economic Approach." *Water Resources Research* 23: 1449-1456. August; Loomis, J. 1997. Use of Non-Market Valuation Studies in Water Resource Management Assessments. Colorado State University; Duffield, J. 2010. *Valuing Ecosystem Services in River and Lake Systems: Methods and Western U.S. Case Studies*. Presentation, Salt Lake City, April 28.

that a restored Delta ecosystem would generate economic benefits far in excess of any benefits arising from constructing a peripheral canal.

Beyond protecting California's common property right in public trust resources, the balancing of limited water supplies must address the relative economic value of competing interests. For example, what is the societal value in providing Kern County, comprising a fraction of one percent of the state's population and economy, the same quantity of Delta water as the South Coast, with half the state's population and economy? What is the value to society of using public subsidies to irrigate impaired lands to benefit some 600 landowners (some have estimated the vertically integrated ownerships to be even less, around 350), and that, by the nature of being irrigated, discharge prodigious quantities of toxic waste that impairs other beneficial uses? What is the economic value of using twice the amount of water to irrigate an orchard in the desert than is required elsewhere? What are the costs and benefits of reclamation, reuse, conservation and development of local sources? Should consumptive use of limited water supplies be prioritized on the basis of efficiency or economic value? Does health & safety take precedence over certain other uses?

The preceding are only examples of the difficult questions that must be addressed in any allocation of limited resources and balancing of the public trust. Economic analysis is crucial to providing the insight and guidance that will enable the Council to meet its mandate. Without such analysis, we do not believe the Council can successfully or legally comply with its legislative and constitutional obligations.

Comprehensive economic analyses are not academic exercises. They are routinely employed by state and federal agencies throughout the nation to address both market and non-market costs and benefits of water projects. A sampling of these resources and best practices is included as Attachment I. It is unlikely that a successful plan which meets the co-equal goals can be achieved without defining the goals that incorporate measurable performance objectives and which provide a scientific basis for evaluating the economic consequences of diverse alternatives. In the final analysis, the restoration of the Delta ecosystem cannot be measured in money spent, programs or projects implemented or acres converted to habitat. It must be measured by specific indices that quantify improvements in water quality and the health and abundance of fisheries and wildlife.

The entire document, while professing to espouse an understanding of the Delta cannot be complete without recognition that as a cultural area the first people of the state are not included or discussed in the document and that the water rights of the California Indians are still to be mitigated at this late date. Tribal uses of water must be considered in order to begin to embrace the failure of agencies to acknowledge tribal water rights as well as cultural rights guaranteed under treaty to access and use water ways and estuaries for tribal existence. California water law has refused to include the mitigation of tribal water rights as senior to all other, as well as the non-abrogation of water rights under treaty, despite the continued inference of the government to the Winters decision.

In addition to these above comments and recommendations pertaining to the Public Trust economic analysis, we have also based our remaining comments on the following overall findings:

1. The Delta is over appropriated and unless exports are reduced to a scientifically permissible level, the Delta estuary cannot be recovered in any scientifically acceptable sense.

2. The over appropriation stems primarily from CVP and SWP contract levels which cannot be met.

3. An aggressive water efficiency program – more aggressive and of longer duration that the 20/20 program – which includes both urban and agricultural users is a necessary component for reducing reliance on the Delta.

4. The Delta ecosystems and wildlife cannot be restored without significant reductions of pollutants that are currently being poured into the Delta and without significant improvements in the fabric of ecosystem habitats essential to sustaining beneficial uses of the Delta.

5. The water use reductions and savings shown in the EWC alternatives make major structural alternatives such as a canal or tunnel around or under the Delta and further surface storage unnecessary for water supply reliability.

6. While the Delta Reform Act provides broad narrative goals for the Delta Plan, it does not provide clear, specific, and measurable objectives as called for in Adaptive Management programs. The Delta Plan must not defer this next necessary step of Adaptive Management. The Plan must begin to establish clear and measurable goals, objectives, and performance measures; it must quantify goals and provide specific accomplishment dates. It must require the same of any BDCP plan that is incorporated into the Delta Plan.

7. As recommended in recent federal biological opinions, evaluations of fish passage around major Central Valley dams connected to the Delta should be conducted in order to determine the possible benefits to endangered salmonid species.

8. The Delta Plan must include actual consultation and planning that includes California tribal nations, federally and non-federally recognized, in order to include tribal needs and concerns for the uses of the waters into and out of the delta and how the transfer and use of these waters affects tribes and the inherent, non-abrogated rights of the tribes to these waters.

Our comments on specific chapters of the Fifth Draft Delta Plan follow.

CHAPTER 2 – SCIENCE AND ADAPTIVE MANAGEMENT.

Although here are no Policies or Recommendations to respond to in this chapter, we have the following general comments and recommendations:

1. The adaptive management program outlined in the Delta Plan, while promising to incorporated science into the decision making process, is little more than window-dressing facilitating business-as-usual. Although here are no Policies or Recommendations to respond to in this chapter, we have the following general comments and recommendations:

2. The Delta Reform Act requires inclusion of science-based adaptive management in the Delta Plan for ongoing ecosystem restoration and water management decisions. While the Delta Plan requires that all covered actions include an adaptive management plan incorporating the nine-step framework, there is nothing that describes how the adaptive management will be implemented, how implementation will be evaluated, or even that it actually be implemented. Indeed, the Delta Plan does not mention the words "adaptive management" in it's *A More Reliable Water Supply*, *Restore the Delta Ecosystem*, *Improve Water Quality to Protect Human Health* and the Environment, *Reduce Risk to People, Property, and State Interests in the Delta* or Protect and *Enhance the Unique Cultural Recreational, Natural Resources, and Agricultural Values of the California as an Evolving Place* chapters. There is nothing in the Delta Plan to indicate that science, rather than the political agenda of water agencies, will determine water management decisions.

    - We therefore fully concur with the Delta Independent Science Board (DISB) recommendations that the principles of adaptive management must be applied in Chapters 4 through 8. These chapters must describe and demonstrate how adaptive techniques can be integrated into the actions proposed for the Delta Plan. Failure to do so would be a major oversight and, as indicated by the DISB, would undermine the legislative mandate for the co-equal goals.[4]

3. The panel convened by the National Research Council of the National Academies, in their 2011 evaluation of BDCP titled *A Review of the Use of Science and Adaptive Management in California's Draft Bay Delta Conservation Plan*, observes that most adaptive management efforts worldwide have failed primarily without the agreement of the water users. The failure to define and quantify critical goals and inclusion of agreements that limit requirements on water users undermine and sabotage the very concept of adaptive management because of institutional problems that include lack of resources necessary for expanded monitoring, unwillingness of decision makers to admit and embrace uncertainties in making policy choices and lack of leadership

[4] Delta Independent Science Board. *Final – Synthesis of Recommendations for the Delta Independent Science Board (DISB) on the Fifth Staff Draft Delta Plan*. September 16, 2011.

implementation.[5] The aims of adaptive management often conflict with institutional and political preferences. This is especially important, given the lack of definition of water supply reliability and ecosystem restoration in the Delta Plan and the inherent contradiction between restoration of the estuary and requirements in the BDCP Planning Agreement that provide assurances that no additional restrictions on the use of land, water, or financial resources beyond agreed-on amounts will be required.

4. Regulatory actions by state agencies, routine operation of the State Water Project, Central Valley Project and local facilities, as well as certain ministerial or emergency project and temporary water transfers are exempt from adaptive management requirements in the Delta Plan. Given the caustic review of BDCP's adaptive management program by the National Research Council's review team,[6] it is highly uncertain to what extent BDCP will include a meaningful adaptive management process. And, given the fact that the BDCP must be incorporated into the Delta Plan, it is uncertain whether the Council can fundamentally modify elements of the BDCP adaptive management program.

5. Previous adaptive management efforts in the Delta have grievously failed. CalFed's adaptive management program chaperoned the accelerated decline of the Delta's ecosystem. The "red light," signaling "take" at the export facilities, was often disregarded and the Water Operations Management Team frequently rejected the recommendations of the technical review teams. Agencies have refused to enforce requirements for project operations that they adopted. For example, the State Water Resources Control Board repeatedly refused to enforce the terms of its Cease and Desist Order against the Department of Water Resources and U.S. Bureau of Reclamation for violations of South Delta salinity standards. It further ignored blatant violations of the Vernalis and Delta outflow standards in 2009. If project operators and oversight agencies can routinely discount the results from adaptive management, then the process is little more than a Hollywood storefront implying progress that doesn't exist.

6. While the Delta Reform Act provides broad narrative goals for the Delta Plan, it does not provide clear, specific, and measurable objectives as called for in this Chapter. The Delta Plan must not defer this next necessary step of Adaptive Management. The Plan must begin to establish clear and measurable goals, objectives, and performance measures; it must quantify goals and provide specific accomplishment dates; it must model linkages between objectives and proposed actions; it must select and evaluate actions for implementation; it must design implementation actions with appropriate monitoring; and it must be peer reviewed. If the plan cannot be enforced, it is illegal:

    - As required in CEQA §15126.4 (D) (2): Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other

[5] Panel to Review California's Draft Bay Delta Conservation Plan, National Research Council. 2011. *A Review of the Use of Science and Adaptive Management in California's Draft Bay Delta Conservation Plan*: Washington D.C., page 38.
[6] *Ibid*, pages 38-44.

public project, mitigation measures must be incorporated into the plan, policy, regulation, or project design.

7. This Chapter needs to specify who makes the decisions on how to Respond or Adapt as a part of the Adaptive Management process. There must be legally binding accountability. To date, many of those decisions have been made (or in many cases not made) by the water exporters. This kind of decision-making cannot be tolerated in the implementation of the Delta Plan.

8. Adequate monitoring, which includes particulates, concentrations, and invertebrates along with sediments and flow is needed to provide early warnings and preventative actions. The extensive network of existing monitoring data needs to be analyzed by scientifically credible agencies to ensure public trust values are not being harmed or degraded.

CHAPTER 3 – GOVERNANCE.

As stated in the draft, the Delta Plan is a strategic plan to provide guidance and make recommendations. The Water Code Section 85020 places some responsibilities on the Council that are state-wide and far reaching. The Council is to establish a structure upon which it may receive guidance and recommendations, both for covered and non-covered actions. The legislature also requires the Council to establish and oversee a committee of agencies responsible for implementing the Delta Plan. In the Fifth Draft there is still no mention of an Implementation Committee. Therefore, we continue to make the following recommendations relative to this responsibility:

1. Identify what relevant agencies must be included in the *"Governance or implementation Committee."*

    - Governance should be inclusive of Delta interests and stakeholders and include at least representatives of NGO agencies, the Delta Conservancy, commercial and recreational fishing, in-Delta community representatives, and landowners. G P1.

2. It is our recommendation that other interest parties be part of the process of decision-making within the Governance Committee to broaden the process to include consideration of non-agency issues. Examples would be:

    - Delta Conservancy
    - NGO representatives
    - Commercial/recreational fishing representative
    - In-Delta Community Representatives
    - Science Advisory Board member

3. Develop an organizational chart, which will show clearly the structure of the governance process, and identifies what additional advisory boards, committees, and outside inputs will be associated with the "Governance/Implementation *Committee."*

4. Develop a clear and concise list of responsibilities for the *Governance Committee,* and make clear the difference in process between covered and non-covered actions. Some areas of possible responsibility are:

    - The guiding principle of any governance committee should be the precautionary principle – First, do no harm. The fragility of the Delta ecosystem is such that it is already operating on the edge of tolerance, even with reduced reliance as mandated by the legislature. Hence, it is inappropriate to do anything that could risk additional stress.
    - General criteria for water operations, ensuring that appropriate Delta flows are maintained, water quality objectives are met, source water is protected, public trust values are protected, and beneficial uses are not degraded.
    - Restoration oversight to facilitate and implement restoration projects within the Delta to meet established restoration timing and completion dates.

- Work with the Science Advisory team to help manage the adaptive management efforts to ensure species recovery of aquatic resources.
- Coordinate with the Delta Conservancy on efforts with Delta communities, counties, and landowners.
- Establish and manage budgets to secure necessary funding both for the Council and for the other efforts in the Delta Plan.
- Oversight and recommendations on implementation of state wide water conservation, water use efficiency and reclamation programs, and ensuring that strategic goals are being both established and met.
- Meet with the SWQCB on important Delta issues – tributary flow criteria, Delta flow criteria, pollution issues in tributaries, illegal diversions, etc.
- Meet with the Delta Protection Commission on Delta levee repairs and other Delta protection issues, and to ensure that deadlines are being met.
- Meet with Delta and watershed communities to understand the best interface with them on local issues of concern, and to take actions necessary to ensure actions of the Council are protecting and enhancing the unique cultural, educational and agricultural values of the Delta and its watersheds.
- Develop specific recommendations for the legislature or other appropriate state agencies for actions to facilitate the Delta Plan to meet its responsibilities of Delta ecosystem protection, restoration and enhancement, as well as water supply reliability.
- Establish appropriate goals and objectives as well as timelines to achieve Delta restoration and water conservation, reclamation and efficiency strategies.
- Meet regularly to discuss the obligations of the SWP and CVP, their oversight responsibilities, and ways to bring contractual obligations more in line with available water.
- In addition to the above, there are other areas of concern that must be articulated within the process of governance, and in some cases, the governance structure must be designed to provide protections against outside interference. There must be a level of independence for decision makers. It must be clear that the science board will have influence on the decision making process, and not be left only as advisors hoping their advice is followed. It is unfortunate, but too many times politics has trumped science in decision-making in the Delta, and with water management in particular. In many ways, the success or failure of the Delta Plan may hinge on the ability to design a governance structure that protects decision makers from the impacts of those who have the desire to alter the process based on limited or short-term pressures.

5. There is little substance in the section titled: How Will The Policies Of The Delta Plan Work In Practice? (Pg. 56, line 28). We would suggest this is the perfect place to include a guidance outline of the process state and local agencies, landowners, and others would go through to meet consistency requirements of the Delta Plan. It is a good place for implementation actions required, as well as what enforcement actions are consistent with the authorities of the primary agencies. For example, recommendations in the area of water rights permit approval, changes in diversion points, or other water allocation issues that impact the co-equal goal requirement of the Delta Plan. (G P1)

6. On Page 54, line 27, we recommend changing the word "promote" to "meet." The sentence would then read: "The Council may incorporate other completed plans related to the Delta into the Delta Plan to the extent that the other plans *meet* the coequal goals." It would be a stronger statement if worded this way. (G P1)

7. Additionally, on line 35, under "Information, Comments, Advice," it would be advisable to provide some guidance on how the Delta Plan Science Program would interface with the BDCP science program, with restoration, monitoring and adaptive management. Currently, the BDCP oversight and management is to be done by the permitting agencies and permittees though the Council has not yet determined which agencies will be included. None of these BDCP oversight entities are scientists, yet they would be allowed to decide questions only scientists should answer. This appears to be inconsistent with the co-equal goals responsibility of the Delta Plan. (G P1)

8. Since the Delta Plan is expected to incorporate the BDCP should state and federal wildlife agencies certify it, we recommend that the Council provide specific, consistent, and regular guidance to the BDCP on what would be required for BDCP to be consistent with the mandates from the legislature in the Delta Plan. An example of the current inconsistency is: The Delta Plan mandates the state water board to establish Delta flows and major tributary flows by 2014 and 2018. It is stated that this is **key to the achievement of the co-equal goals** (line 7, pg. 86). Yet, there is no such policy in BDCP, since petitioning partners in the BDCP are opposed to establishing these flow standards. If the BDCP does not incorporate or use these flow standards in the plan, it would then NOT meet the co-equal goals required by the Delta Plan. It is hard to understand how the BDCP could be incorporated with this current inconsistency, and if it were, the Delta Plan would likely be challenged in court.

9. There needs to be a clear policy on the role of wildlife agencies relative to governance of restoration and adaptive management. What role will they have relative to final decision-making, including on water operations, both annual planning and real-time operational changes? Since the Council may be relying on the BDCP to provide this, again, we recommend the Council provide guidance to the BDCP on what is required to meet the statutory mandate of the Delta Plan. It is our opinion that wildlife agency input is being marginalized in the current BDCP plan, and it is critical for the Council to help clearly communicate to the exporters that the engagement of the wildlife agencies is critical to success in the Delta, and critical to BDCP becoming part of the Delta Plan. (G P1)

CHAPTER 4 – WATER SUPPLY.

We view an aggressive statewide water efficiency and conservation program as a primary requisite toward reducing reliance on the Delta, as prescribed in your legislative mandate. A program that reduces overall water consumption throughout the state, especially in the intensive farming areas and major population centers relying on the Delta, makes possible the achievement of this critical mandate of reduced Delta reliance. The mandate likely will not be met without this cost effective water supply program.

One of the best opportunities to accomplish a thorough economic analysis of Public Trust values and balancing is by examining the alternatives to exported water. The alternatives to a continued high level of Delta exports are many, and they are contained in the efficiency and water use reduction solutions that are recommended in the EWC report: *California Water Solutions Now,* which is one of the alternatives being examined by your Council.

The Delta Flows Criteria promulgated by the State Water Resources Control Board clearly indicates that the state has reached – and exceeded – the amount of water that can responsibly be diverted from the Bay Delta. As a result, the Council should anticipate future limitations on Delta exports below the level of the 2000-2007 time periods in its Delta plan to meet the Delta ecosystems restoration goals. Those future reductions, at whatever levels they turn out to be, can only be accomplished if consumption levels are simultaneously decreased.

Climate change is likely to reduce the amount of water available from existing surface and groundwater sources; future climate conditions will also reduce the amount of water available for export from the Delta.

Our recommendations to be included in the Draft Delta Plan and DEIR are:

1. In view of the well-recognized over allocation of water supplies from the Delta, the SWRCB should be directed to use their constitutional authority to review and modify all CVP and SWP contracts and water rights to a yield that is historically and predictably achievable and which can be reliably supplied. "Water supply reliability" cannot be defined by the current contract levels or the current level of diversions. (WR P1)

2. The SWRCB should no longer issue permits for increased water diversions or contributions to storage until at least the SWRCB flow criteria have been established, especially in view of the over allocation of supplies from the Delta. (WR R5)

3. The water use reductions and savings shown in our alternatives may make major structural alternatives such as a canal or tunnel through the Delta and further surface storage unnecessary for water supply reliability. Cost savings to the state would conservatively approximate $15 to $20 billion. (WR R6, R7)

4. Direct the Department of Water Resources to regain public control of the Kern Water Bank and dedicate the water supply for the benefit all Californians. (WR P1)

5. The "Urban Preference" must be reinstated in the State Water Project contracts. The "Urban Preference" means that urban water users have priority over agriculture based on the California Water Code: during shortages, people take precedence over agriculture. This was arbitrarily removed from the State Water Project contracts by the Monterey Plus Amendments and needs to be reinstated. The "Urban Preference," combined with returning the Kern Water Bank back as a public asset, will assure that there will be less pressure on the Delta for water as the 2009 legislation requires. The Kern Water Bank can store the "Urban Preference" south of the Delta for times of drought for the 22 million urban users south of the Delta. (WR P1) (Version 2.1.)

6. The pumping of what is referred to as Article 21 "surplus water", which was put in place by the Monterey Plus Amendments to the State Water Project contracts, has proven so harmful to the fish and the environment that Judge Oliver Wanger required that pumping during the times that this so called "surplus" water was being pumped had to stop. Article 21 of the State Water Project contracts must be amended to reflect this reality. (WR P1) (Version 2.1)

7. The goal of reduced reliance on the Delta can be achieved by increasing groundwater storage facilities south of the Delta. To that end, we recommend that the Council require a complete evaluation of groundwater storage possibilities in the former Tulare lake bed, as advanced by the San Joaquin Valley Leadership Forum. (WR P1)

8. Because of the critical importance of emphasizing a conservation rate structure, it should be implemented sooner than December 2020, as called for in Draft Plan. (WR P1)

9. The Council should require water suppliers to document actual or projected net reductions in reliance on Delta exports as part of their reporting obligations; the reporting obligations should indicate the impact on the total Delta water budget. (WR P1, R3)

10. Establish a more ambitious long-term urban water conservation target, as indicated in our report, *California Water Solutions Now*, to succeed the 20/20 goal. We do not concur with the Draft Plan, which puts the establishment of that future target to some unspecified future date. (WR P1)

11. Establish a statewide agricultural water conservation target of 1 MAF by 2020, 2.5 MAF by 2030 and 3.5 MAF by 2040. (WR P1)

12. IRWMP projects must provide disadvantaged communities with water for health and safety purposes and that meet drinking water standards. (WR P1)

13. The Fifth Draft Plan continues to encourage "groundwater storage" (pp. 87- 98) and "conjunctive management" or "conjunctive use" (pp. 80, 83, 84, 88, 89, 90, 93) without illustrating what conditions must be met to enable ground water storage and/or conjunctive use, whether there are known problems and legal challenges to existing ground water storage and or conjunctive use projects, and whether these possible strategies are appropriate in all hydrologic areas covered by the Delta Plan. We caution

against using sweeping language of possibility regarding ground water storage and conjunctive use when, as the Plan discusses: "…the current status of groundwater management throughout California was unknown (DWR 2003a), and remains so today," (p. 92). In addition, serious impacts from current and historic practices have already altered some ground water basins severely (pp. 91 – 93), so the depth of uncertainty and acknowledgement of past failures should accompany any suggestions of ground water storage and conjunctive use. (WR R7)

14. The Sacramento River is California's largest river, and its watershed's contribution to the State's economy and communities is unquestioned, but it is not invincible to human activities. The Sacramento River and its tributaries have many impaired segments on the 303(d) list, its salmon runs are still struggling to survive, it is home to many more imperiled species, and the farms and communities within its boundaries have significantly stretched its water resources. The State has long looked to the Sacramento River watershed as a solution for escalating demand south of the Delta. An early attempt at conjunctive use in Butte County in 1994 revealed the folly of moving forward with large ground water extractions when so little was (and still is) known about the hydrologic region.

15. Seventeen years later, the Plan's proposed ground water storage and conjunctive use proposals have the potential to cause significant impacts in both the areas of origin and the receiving areas.' As noted above, there remains minimal scientific knowledge regarding the interactions between ground water and surface water and the needs of species in the watershed that California relies upon the most. Yet it is possible that "Fundamental scientific principles (e.g., effective stress and its key role in poromechanical response of an aquifer) have been well understood for decades, and validated predictive modeling of aquifer response is well within the capabilities of modern science and engineering practice," (Mish 2008). The state of hydrological knowledge is sufficient to recommend protective actions on groundwater based on the Precautionary Principle. If ground water storage and conjunctive use remain tools in the Plan's toolbox, we insist that the DSC require the kind of scientific research on aquifer mechanics that Professor Mish explains is not only possible, but common, *prior* to implementation of any new or expanded ground water storage and conjunctive use projects. (WR R7)

16. Attempting to establish conjunctive use and ground water banking in the Sacramento Valley, and expanding efforts south of the Delta, raises serious unanswered questions regarding the risks associated with such exploitive actions that have already devastated the Owens and San Joaquin rivers and valleys. It is helpful that the Plan highlights some of the significant damage from current and past excess ground water pumping and manipulation of hydrologic systems, yet the Plan seeks to use the same practices that created the problems that the Plan seeks to ameliorate. Knowing this, we continue to encourage the Council to consider a new paradigm that is provided in our comments on the Plan's first draft. (WR R7)

17. However, relying on ground water storage and conjunctive use as a significant part of the Delta Plan, the Delta Plan and the Environmental Impact Report must disclose and

analyze the risks associated with these strategies and expound upon the uncertainty. Those risks include (WR R7):

- Hydrogeological Risks
- Water Quality Risks
- Legal Risks
- Financial Risks
- Public Health and Safety Risks

18. The Trinity River is a Delta Tributary Watershed under California Water Code Section 78647.4(b) and is shown in Figure 1 of the Delta Plan. Figure 1 states that the Delta Plan "may affect" other areas of California, including the Trinity River. However, it is clear from the legislative and administrative record that the diversion of Trinity River water is limited to water that is surplus to the needs of the Trinity River basin, which includes the amount of water necessary to meet the federal government's Tribal Trust obligations to protect and restore the fishery resources of the Hoopa Valley and Yurok Tribes. Therefore, the Delta Plan should contain a policy that meeting the co-equal goals of water supply reliability and ecosystem restoration shall not adversely impact the Trinity River, as defined by meeting the flow requirements of the Trinity River Record of Decision[7] and meeting Trinity River temperature objectives contained in the "Water Quality Control Plan for the North Coast Region"[8] by the North Coast Regional Water Quality Control Board.

[7] See http://www.trrp.net/?page_id=72, accessed 9/14/11.

[8] See "Water Quality Control Plan for the North Coast Region" Table 3-1, page 3-8.00, footnote 5, located at http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/083105-bp/04_water_quality_objectives.pdf, accessed 9/14/11.

CHAPTER 5 – RESTORE THE DELTA.

As indicated in the Preface to the Fifth Draft Delta Plan: "California's Delta has long been a battleground for the many competing interests that have a stake in how it is used - and abused….. Conflict over what to do, when to do it and how to pay for it continues to embroil the Delta in controversy." An analysis of the economic and Public Trust values of the Delta, if accomplished on a par with the thoroughness of the Mono Lake case, would resolve much of the current controversy and point to solutions that would have long-term benefits for all Californians.

We were struck by the Palmer, et al 2005 criteria for successful ecosystem restoration, and their first recommendation that was included in the Fourth Draft of the Delta Plan: "The project should be based on a clear guiding image of the type of dynamic and healthy ecosystem to be achieved." We are also struck by the fact that this reference no longer exists in the Plan. Though the 5th draft gives glimpses of what the Council would like to see, there continues to be little definition of what a restored Delta should look like, or when some success is expected. We recommend that the Delta Science Board be tasked with creating measurable criteria of what a "recovered" Delta should look like.

For listed species and species that are key to the livelihood of many communities, commercial, and recreational fishing as an example, this is critical. Neither have unlimited time for restoration work to produce results. In the case of listed species, they survive on the thinnest of threads, and need action sooner than later. Defining what and when improvements are needed, and how that will happen is important. Additionally, there is a priority to what needs to be done, defined by species vulnerability, and we suggest that the Council put in language that requires the Delta Science Program to prioritize actions, with date certain, like that of the SWRCB flow requirements for the Delta and major tributaries. What are the highest priority species, and what actions need immediate funding and action?

1. We agree that development, implementation, and enforcement of new and updated flow requirements for the Delta and high priority tributaries is key to the achievement of the coequal goals. (ER P1)

2. We agree with the dates required for the SWRCB flow recommendations for both the Delta and major tributary rivers. We also agree with the review date in 2013, and ask the Council to be most demanding of the SWRCB to complete these recommendations on time, and if not, to hold to limitations of further water rights authorizations, or other increased authorization for water uses suggested in the two bullets on page 114, lines 1-7. (ER P1)

3. We would recommend adding, "establish an enforceable mechanism to ensure water exports from the Delta and water transfers are consistent with the flow standards established by SWRCB recommendations and, until they are issued, the current Biological Opinions for Delta Smelt and Salmon/steelhead should apply." (ER P1)

4. We agree with the Council's reliance on the Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento

and San Joaquin Valley Regions (DFG 2011). We would recommend that the Council require DFG to fully integrate restoration with inputs from the NMFS and FWS, both for riverine as well as terrestrial habitats. (ER P2)

5. **Additional EWC recommendation:** We ask for upstream recommendations for habitat restoration be made to other agencies that have that ability, as it will bring greater species recovery success and resiliency, and reduce overall in-Delta recovery needs. Water use and diversions north of the Delta, as well as land use decisions, have great influence on the Delta's ability to be supportive of fish and wildlife.

    - As recommended in recent federal biological opinions, evaluations of fish passage around major Central Valley dams connected to the Delta should be conducted in order to determine the possible benefits to endangered salmonid species.

    - The recent NOAA/NMFS decisions and programs to reintroduce salmon above the rim dams as well as the other restoration projects demand that any plans for the Delta consider the effects of pumping on salmonid population migration into and through the delta and on to the upper rivers of the state.

    - Alternative flow schedules that provide colder releases to sustain these fish populations during critical time periods also needs further examination.

6. We appreciate the need to expedite habitat restoration in the Delta, and the prioritization of the areas listed in this section. It is our opinion that listed species do not have time to waste, and acknowledging this through this section is critical to survival and restoration of several listed species on both the Federal and State Endangered Species list. (ER R1)

    - As stated in Chapter 5: "An overarching goal for ecosystem restoration in the Delta Reform Act is to restore fish and wildlife to include more viable and resilient populations of native resident and migratory species." We see no recommendations in this chapter that are specific to the recovery of endangered fish species; **we regard this as a major oversight.** Measurable goals for species recovery need to be included as part of the ecosystems recovery actions. (ER P1, R2)

    - We recommend language and actions which reflect that: "every effort will be made, consistent with the FWS and NMFS recovery plans for listed species, to recover all listed species to viable, self-sustaining populations." Changes in Delta conveyance that would contribute to species extinction are impermissible under the California Endangered Species Act, the Natural Communities Conservation Planning Act, the federal Habitat Conservation Plans as well as Sections 7 and 10 of the Federal Endangered Species Act. (ER R8)

7. The priorities for the Delta Conservancy all appear to be appropriate and necessary. It is appropriate for the Council to make some recommendations on timeframes for

accomplishing each of the listed tasks, or at least request the Conservancy to provide timeframes for each area, and to prioritize the projects based on which will provide the greatest return for listed species. Additionally, some recommendations on how the Conservancy should interface with private landowners and others who have ownership of Delta lands, and could contribute to recovery without land purchase. It is critical that the Conservancy, if they are to be the lead on restoration, identify and work with everyone who can be helpful. (ER R2)

- Delta counties and landowners must be full partners in developing and implementing habitat restoration programs so that a desirable mix of aquatic habitat restoration and sustainable agriculture is achieved. See the previous recommendation related to Governance. (ER P2, ER R1, ER R2)

8. We agree that State and federal fish agencies should complete ongoing negotiations toward a habitat credit agreement with water supply agencies. But with this recommendation, we request that language be put into this section that prevents water supply agencies from receiving increased water supplies based on giving a habitat credit agreement. There should be no opportunity for a quid-pro-quo on water and habitat. (ER R3)

9. The Delta Plan needs to be realistic regarding proposing habitat measures, such as riverine habitat on project levees, since vegetation is not allowed by USACE. (ER R4)

10. **Legacy Stressors -** Though we understand these came from the Delta Independent Science Board, we agree that past impacts cannot be undone, but some can be improved or eliminated in the future. We would hope that several of the listed issues will be addressed and changes made that improve conditions in the Delta.

11. **Current Stressors –** One of the recommendations we have made in all our inputs to the Council is reducing the inflow of selenium and other toxic inflows from primarily the San Joaquin valley. The current CVRWQCB waiver on meeting water quality standards from agricultural lands simply continues this "legacy stressor". We strongly recommend the Council ask the SWRCB to block the waiver, and work with the CVRWQCB to establish a process for reduction of non-point pollution in the central valley to the level that it is brought into compliance with the state and federal water quality standards, like everyone else in the state must meet. Since toxic inflows were identified as one of the three primary drivers of the pelagic organism decline (POD), it seems more than necessary to deal with its causes as soon as possible. A strong recommendation to the state water board from the Council, with a date certain (like the flow recommendations) seems a reasonable ask.

12. Although we agree that controlling and reducing impacts for invasive species is an important part of improving the Delta, it is also clear that in some cases water management has led to some of these problems. The clam problem in Susuin Marsh is one example. Additionally, there has been much focus lately on Striped Bass because they pray on listed salmonids. It is our opinion that Striped Bass have been part of this

ecosystem since 1879, and are fully integrated into the fabric of the Delta. They are one of California's prized sport fish, and their numbers have gone up and down proportionately with both Delta Smelt and Salmonids. They were present in greater numbers in 2005 when fall run Chinook numbers were close to one million, and were part of the estuary when salmon and steelhead numbers were in the several millions. Additionally, in those times Striped Bass numbers were high as well. We would recommend that invasive species control actions not include Striped Bass.

13. We agree that the Department of Fish and Game should prioritize and fully implement the list of "Stage 2 Actions for Nonnative Invasive Species" with the exception of Striped Bass, discussed above. (ER R6)

14. We agree the workshops would be a good way to engage a wider audience, and develop ways to reduce the stressor impacts. (ER R7)

15. **General Comments on the Bay Delta Conservation Plan -** The BDCP has not defined "greater water supply reliability," but it is well know that the applicants and their contractors are working to remove more water from the Delta System. Additionally, incorporation of the BDCP into the Delta Plan is anticipated if DFG, FWS, and NMFS certify it as meeting their biological standards. We ask the DSC to provide guidance to the BDCP on what is required to meet the legislative mandates of Delta ecosystem recovery, improved water quality in the system for fish and wildlife, as well as the Delta human needs, and the need to factor in the State Water Board's Delta and tributary flow requirements coming in the future.

    The definition of "water supply reliability" is important and can impact economic sustainability of the Delta. The Delta Plan acknowledges multiple strategies or objectives referenced in the Delta Reform Act that must be addressed to improve water supply reliability. A more specific definition of water reliability allows for economic analysis or at least the presentation of factors relevant to economic sustainability. For example, if water reliability is defined as export levels prior to 1970, reduced by the effects of climate change and needs within the watershed, this might represent the average level of exports which could realistically be more reliable. This level had less of an impact on fish populations than the impact of exports from 1970 to 2010. The 1970 level of export is conceivably sustainable with through Delta conveyance and this would have a different impact on economic sustainability than that of expanded exports. Expanded exports utilizing isolated facilities, which has been proposed in the BDCP, would have a footprint that takes farmland out of protection, off local tax rolls and could alter channel flows threatening the salinity of the Delta. These conflicts with the Plan's proposed performance measure in Chapter 8, which states that progress toward improving economic sustainability of Delta land uses and protection of the Delta's agricultural values should be measured by "total agricultural acreage and gross revenue in the Delta (that) will be maintained or increased in the future." A more precise definition of "water supply reliability" could avoid these kinds of conflicts.

- With reference to the Delta Flow Criteria adopted by the State Water Board, the Council should determine specific maximum quantities of water that can be exported under varying water type years and hydrological conditions in order to provide measurable criteria for the goal of "water supply reliability." We cannot manage what is not measured. (ER R8)

16. BDCP is currently developing alternatives for evaluation, focused on alternative conveyance sizing, operations, and level of restoration. We ask the Council to work with the BDCP to help them establish a list of alternatives for evaluation that would likely provide information based on the Council's understanding about **"less reliance on the Delta."**

    - Analyze, or require BDCP to analyze, at an equal level of detail, conveyance facility capacities from 3,000 cfs to 15,000 cfs as well as alternatives that would utilize existing conveyance without major new conveyance facilities. (ER R8)

    - Direct the BDCP to perform a full economic analysis with Public Trust values considered in each of the alternatives they examine. If this is not accomplished by BDCP, the Delta Stewardship Council should have the analyses performed in order to produce a legally compliant EIR. (ER R8)

17. We agree with the recommendation that they complete the BDCP consistent with the provisions of the Delta Reform Act. However, as stated above, this is unlikely to lead to BDCP meeting either the flow requirements or the water quality standards envisioned in the Delta Plan, and as such, likely would not meet the recovery objectives. Since BDCP is a 50 year plan, it must meet the Delta Reform Act mandates, and from a practical sense, the Council must work closely with BDCP on issues like developing alternatives. (ER R8)

    - The purpose of the evaluation of any Delta facility is to decrease the physical vulnerability and increase the predictability of Delta supplies, not to increase Delta diversions. (ER R8)

18. The list of performance measures is a start on narrowing in the requirements for achieving the vision of the Delta Plan. That said, it is a must that these "general" measures become more specific. The listing of the 3 types of performance measures - Administrative, Driver, Outcome - with a listing of issues is a good start to bringing specificity and targets to the process.

19. We would advise that input from the Delta Science Program could be asked to bring more "real time" timeframes to these measures, and at least provide some goals both on "due dates" as well as some numbers for restoration levels. Too many of the issues have no "due date, or target numbers". More specificity brings the process to life. How many resident and migratory fish species? What is a viable population, and how long should it take to achieve it? How many acres restored where and by when? How does adaptive management fit into performance measures? How will adaptive management be done, and how often will evaluation be done on completed projects,

and how will the adaptive management work be applied, and how will change be integrated? Some guidance from the Council needs to be part of the Delta Plan.

- Of course, who pays for what is still a huge question that looms, and must be answered so this actually has legs on the ground.

CHAPTER 6 – IMPROVE WATER QUALITY.

Nothing is more illustrative of the inherent contradiction between the coequal goals of water supply reliability and ecosystem protection than the discussion and recommendations regarding water quality in Chapter 6 of the Delta Plan. As mass pollutant loadings to the estuary have inexorably increased, residence time, flushing flows to the sea and dilution has substantially decreased. Diversions by the Central Valley Project and State Water Project caused residence time for pollutants in the Delta to increase 100% by 1987.[9] Since then, residence time and pollutant concentration have continued to increase in step with greater exports from the system.

The cumulative and interactive effects of multiple physical, chemical and biological stressors, including discharges of municipal and industrial stormwater and wastewater, agricultural return flows and ubiquitous urban and agricultural chemical application have impaired the Delta's sustainability as a viable habitat for a rich mix of productive species, compromised sources of municipal drinking water, diminished recreational activities and adversely impacted agricultural production. Increased pollutant loading and/or increased quantities of water diverted from or around the estuary will significantly exacerbate existing water quality problems and further impact Delta agriculture, recreation, municipal water supplies and the sustainability of the ecosystem.

California's Porter-Cologne Water Quality Control Act was adopted in 1969. Sections of Porter-Cologne were used as the basis of the federal Clean Water Act, which was adopted in 1972 and amended in 1977 and 1987. The Clean Water Act states that it is the "national goal that the discharge of pollutants into the navigable waters be eliminated by 1985" and it is the "national policy that the discharge of toxic pollutant in toxic amounts be prohibited."

Almost 40 years after adoption of the CWA and Porter-Cologne, virtually every significant water body in the Central Valley, including the entire Delta, is identified as "impaired" and incapable of supporting identified beneficial uses because of multiple pollutants. With the exception of several legacy pollutants, these impairments exist because the chronically understaffed[10] agency

[9] Rozengurt, M., et al. 1987. *"Analysis of the Influence of Water Withdrawls on Runoff to the Delta-San Francisco Bay Ecosystem (1921-1983),"* Technical Report Number 87-7, Tiburon Center for Environmental Studies. May. Page I.7.

[10] The Executive Officer of the Central Valley Board, Ms. Pamela Creedon, acknowledged in an August 2007 presentation to the State Board titled *State of the Central Valley Region* that the Board had only: a) 12% of the staff minimally necessary to regulate stormwater discharges (NPDES), b) 37% of those necessary to control municipal wastewater discharges (NPDES), c) 26% of those necessary to issue WDRs, d) 16% of those required to regulate dairies, e) 22% of the staff crucial to enforcing conditions of the controversial agricultural waivers, and f) only 11 of the 38 people necessary for the basin planning unit to update the Basin Plans that are fundamental to all Board actions. The Board's surface water ambient monitoring program had only 2 person-years (PYs), its enforcement unit was assigned only 3.5 PYs, the water quality certification unit had only 2.6 PYs to process more than 400 certifications annually. Further, the underground storage tanks unit had only 17 of 41 staff needed for several thousand cases, the timber harvest unit had only 9.2 PYs to regulate and monitor discharges from thousands of timber projects covering 45% of the state's harvested timber and the Title 27 unit had only 40% of those needed to regulate leaking landfills and surface impoundments. And finally, the Board had only 16 PYs to develop, implement

charged with implementing water quality statutes has been unwilling or unable to carry out its mandated responsibilities.[11]

Despite the serious and broadly recognized impacts that deteriorating water quality poses to the viability of the Bay-Delta, Chapter 6 calls for no new, meaningful actions to address this threat. Rather, Chapter 6 simply reiterates existing efforts and already-planned initiatives that will do little to reverse the ongoing slide. It requests understaffed agencies to accomplish measures they have been unable or unwilling to do over the last 30 years.

The Water Quality Chapter plays the critical role in the Delta Plan of describing the regulatory and water quality status quo in the vast primary and secondary planning areas covered by the Delta Plan, and then making recommendations to address the uncovered problems.[12] Preventing and addressing pollution at its source is essential to ensuring that people and environment can use water safely and affordably – especially given that water treatment costs regularly exceed the costs of many water pollution prevention measures.

As was discussed in our earlier comments on the Second Draft Delta Plan, State and Regional Water Board impaired waters assessments demonstrate that water body impairments already run broadly throughout the planning area and impair numerous aquatic habitats. We provided further information demonstrating that water quality issues in the Delta and the planning areas are both pervasive and well known.

Below, we reiterate a few of numerous examples of why the Council's approach and recommendations, with respect to water quality, are inadequate, counter-productive, and unlikely to secure improvement in water quality.

1. Agricultural Discharges

It is notable and a complete failure that Chapter 6 merely mentions in passing the ineffective Central Valley Regional Water Quality Control Board agricultural runoff waiver, or the utter

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and monitor TMDLs covering over 300 water body/pollutant combinations identified as "impaired" throughout the Central Valley (Note: there are now 730 water body/pollutant combinations identified as impaired and Regional Board staffing levels have been reduced since 2007).

[11] The Central Valley Regional Water Quality Control Board is responsible for issuing 65 municipal wastewater NPDES permits (permitted discharge of 983 million gallons/day, 721 mgd in the Delta), 62 industrial wastewater permits (951 mgd, 480 mgd in Delta) and over 1,100 Waste Discharge Requirements regulating wastewater discharges to land. It is also responsible for issuing more than 90 municipal stormwater permits, approximately 2,000 industrial stormwater permits and some 5,500 construction stormwater permits, as well as regulating over 1,600 dairies, more than 400 other confined animal operations, approximately 400 wetland fill projects annually, discharges from 45% of the state's timber harvest projects and runoff from thousands of irrigated farms spanning more than 6 million acres in the Central Valley.

[12] As noted in the Notice of Preparation, the Delta itself plus the Watershed of the Delta, and areas tributary to the Watershed, span a wide swath of the central part of the state. Delta Stewardship Council, "Notice of Preparation: Draft Environmental Impact Report for the Delta Plan," Figure 1: Proposed Planning Area for Delta Plan Environmental Impact Report," p. 12 (Dec. 10, 2010), available at: http://www.deltacouncil.ca.gov/docs/DSC_Notice_of_Preparation_120910.pdf.

lack of any regulatory controls at all on agricultural runoff within the San Francisco Bay Area Regional Water Board purview. After 28 years of "conditional waivers," the Central Valley Regional Board cannot identify who is actually discharging, what pollutants are being discharged, the localized impacts to receiving waters, whether management measures are being implemented or if implemented management measures are effective in reducing pollution. This failure reinforces the gross inadequacies of this chapter in addressing water quality problems in the Delta. (WQ R1, R5, R6)

Irrigated agriculture is the largest source of pollution and impairment in the Central Valley, responsible for 57% of impairments where sources are identified and almost 80% of identified sources that can be reasonably regulated and controlled. By contrast, urban runoff is only identified as causing impairment to less than 12% of known sources of impairment.[13] The only region-wide assessment of data collected at 313 sites by U.C. Davis and the agricultural coalitions, pursuant to the Irrigated Lands Program, reveals epidemic pollution.[14] The Council should consult the State Water Board's recent report to the Legislature on data and strategies for reducing agricultural pollution runoff into the Delta, as well as a detailed summary of existing Delta agricultural regulatory programs.[15] Among other things, the report finds that "over 60 percent of the exceedances of water quality objectives we have identified occur during the

[13] See State Board's *2010 Integrated Report Clean Water Act Section 303(d) List / 305(b) Report* that was submitted to U.S EPA in August 2010. Category 5 (impairments requiring development of a TMDL) and Category 4A (impairments being addressed by USEPA approved TMDLs) identify some 730 pollutant/water body impairments in the Central Valley. Agriculture is identified as the source of 269 pollutant/water body segments covering 1,572 waterway miles and 96,147 acres of open water. Sources of impairment to 257 pollutant/water body segments remain unidentified. However, it is likely that agriculture will ultimately be identified as causing or contributing to many, if not most, of these impairments, as the pollutants or causes are closely linked to agricultural areas and activities.[13] The largely intractable source of resource extraction caused by legacy mining is identified as causing 257 pollutant/water body impairments. Urban runoff is identified as causing 55 impairments. Invasive species, hydro-modification, recreation, construction and historic land management are responsible for approximately 2.7% of impairments. The State Board report can be found at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

[14] Central Valley Regional Water Quality Control Board, *Irrigated Lands Conditional Waiver Program: 2007 Review of Monitoring Data*. The report revealed that: 1) toxicity to aquatic life was present at 63% of the monitored sites (50% were toxic to more than one species), 2) pesticide water quality standards were exceeded at 54% of sites (many for multiple pesticides), 3) one or more metals violated criteria at 66% of the sites, 4) human health standards for bacteria were violated at 87% of monitored sites and 5) more than 80% of the locations reported exceedances of general parameters (dissolved oxygen, pH, salt, TSS). While the adequacy of monitoring (i.e., frequency and comprehensiveness of monitoring) varied dramatically from site to site, the report presents a dramatic panorama of the epidemic pollution caused by the uncontrolled discharge of agricultural wastes. *See, e.g.*, Letter from California Sportfishing Protection Alliance to Central Valley RWQCB, "California Sportfishing Protection Alliance Comments on Draft Irrigated Lands Regulatory Program - Program Environmental Impact Report" (Sept. 27, 2010), p. 51, available at: http://calsport.org/doc-library/pdfs/31.pdf. The Report itself can be found at http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/staff_monitoring_data_analysis/2007_monitoring_data_report/index.shtml

[15] SWRCB and Central Valley RWQBC, "Report to the California State Legislature Joint Legislative Budget Committee on Reduction of Agricultural Pollution Runoff into the Sacramento-San Joaquin Delta" (Dec. 2010) (Report to Legislature), available at: http://www.cacoastkeeper.org/document/report-to-legislature-on-delta-agricultural-pollution.pdf/ (Table 2, page 13 of the report provides a summary of existing Delta agricultural regulatory programs; this summary is expanded in the report's Attachment 1).

irrigation season;"[16] the Report then demonstrates the impacts of this finding through a summary in Table 1[17] (inserted below) of the significant agricultural contributions to water quality exceedances. The Report provides an expanded analysis of this summary information in its Attachment 2 ; such information should be carefully reviewed and included as appropriate.

Table 1
AGRICULTURAL CONTRIBUTIONS TO WATER QUALITY EXCEEDANCES IN AGRICULTURALLY DOMINATED WATERWAYS IN THE SAN JOAQUIN RIVER WATERSHED AND SOUTH DELTA

	Water Body/Pollutant Exceedances				
Parameter Category	Total Count	Irrigation Season	Non-Irrigation Season	Programs to Address	Goal date for Full attainment of Beneficial Uses
Agricultural Practices Likely Cause or Contribute to the Problem					
TDS/Electrical Conductivity	668	58%	42%	▪ San Joaquin Salinity and Boron TMDL ▪ CV Salts	2014 - 2026 Under Development
Pesticides	208	72%	28%	▪ San Joaquin River and Delta Diazinon and Chlorpyrifos TMDLs ▪ Irrigated Lands Regulatory Program	2010 - 2011 2011 - 2019
Legacy Pesticides	139	82%	18%	▪ Irrigated Lands Regulatory Program (addressing through sediment control) ▪ Legacy Pesticide TMDL	2011 - 2019 Under Development
Toxicity, Sediment, Scud (Hyalella)	73	62%	38%	▪ Sediment Quality Objectives	Under Development
Toxicity, Water Column, Water Flea (Ceriodaphnia dubia)	63	69%	31%	▪ Irrigated Lands Regulatory Program	2011 - 2019
Nutrient	34	69%	31%	▪ Irrigated Lands Regulatory Program ▪ Dairy Program	2011 - 2019
Selenium	2	33%	67%	▪ San Joaquin River Selenium TMDL	2010
Agricultural Practices that Potentially Cause or Contribute to the Problem					
E. Coli	611	59%	41%	▪ Irrigated Lands Regulatory Program ▪ Dairy Program	2011 - 2019
Dissolved Oxygen	530	69%	31%	▪ Irrigated Lands Regulatory Program ▪ Stockton Deep Water Ship Channel TMDL	2011 - 2019 2011
Toxicity, Water Column, Algae (Selenastrum)	95	57%	43%	▪ Irrigated Lands Regulatory Program	2011 - 2019
Uncertain Agricultural Contribution					
Metals	411	63%	37%	▪ Irrigated Lands Regulatory Program	2011 - 2019
pH	131	69%	31%	▪ Irrigated Lands Regulatory Program	2011 - 2019
Toxicity, Water Column, Fathead Minnow (Pimphales Promelas)	21	52%	48%	▪ Irrigated Lands Regulatory Program	2011 - 2019

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The Central Valley Regional Water Quality Control Board Irrigated Lands Regulatory Program, referenced extensively in the SWRCB Report to the legislature but essentially ignored in Chapter 6, has also produced a wealth of water quality data. In Attachment I, we provide a summary of just some of the findings of two recent reports from this effort that should be considered in developing the final Chapter 6. (WQ R1, R3, R5)

An additional missing discussion is on the cumulative impact of mixtures of contaminants on Delta health, particularly pesticides. For example, the Delta Independent Science Board's recently released Delta Stressors Memo[18] highlights pesticide pollution as a key Delta stressor, with contamination from pesticides currently killing fish and degrading ecosystems even at low and legal concentrations. For example, a study by NOAA and Washington State found that five of the most common pesticides used in California and the Pacific Northwest – diazinon,

[16] *Id.* at 2.
[17] *Id*. at 8.
[18] Memorandum from Delta Independent Science Board to Delta Stewardship Council, "Addressing Multiple Stressors and Multiple Goals in the Delta Plan," Attachment 2, p. 4 (Jan. 26, 2011), available at: http://deltacouncil.ca.gov/delta_science_program/isb/isb_meetings.html (highlighting "pesticide release" from agriculture, industry and residential use as a current Delta stressor).

malathion, chlorpyrifos, carbaryl, and carbofuran – act in "deadly synergy" by suppressing an enzyme that affects the nervous system of salmon.[19] Even where exposures to a single chemical did no harm, pairing chemicals lowered enzyme activity, sometimes fatally. Scientists concluded, "[s]ingle-chemical risk assessments are likely to underestimate the impacts of these insecticides on salmon in river systems where mixtures occur." In other words, the above research and numerous other studies[20] demonstrate that even if current laws are implemented fully, they will fail to protect fish, because the standards on which they are based are too low. Unfortunately, as is well-known, many Delta and planning watershed waterways do not even meet current, inadequate, standards, and are in fact significantly polluted, in many cases well above standards. (WQ R8, R9)

Significantly, none of the suggestions in Chapter 6 include the overhaul of the current, weak Central Valley Irrigated Lands Regulatory Program, which has failed, and will continue to fail without significant modifications, to protect the health of the Bay-Delta Estuary. Indeed, under "Policies" on page 148, the Plan incredibly states "No policies with regulatory effect are included in this section." The inadequacies of the existing Central Valley Irrigated Lands Regulatory Program have been exhaustively documented.[21] We recommend that the Delta Plan specifically address those inadequacies and recommend changes outlined by NGOs, including the following:[22] (WQ R5)

- Individual Growers Covered; Not Third Parties: Individual growers would apply for coverage. No third-party applications would be authorized.
- Farm Water Quality Management Plans (FWQMPs): Growers would be required to develop and implement individual FWQMPs in order to minimize discharge of waste to groundwater and surface water from irrigated agricultural lands.
- Tiered Approach: Fields would be placed in one of three tiers based on their threat to water quality. The tiers represent fields with minimal (Tier 1), low (Tier 2), and high (Tier 3) potential threat to water quality. The tiers would be used to adjust the monitoring requirements, assist the dischargers in determining the level of management measures

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[19] Laetz, Cathy, *et al*, "The Synergistic Toxicity of Pesticide Mixtures: Implications for Risk Assessment and the Conservation of Endangered Pacific Salmon," *Environmental Health Perspectives*, Vol. 117, No. 3 (March 2009), available at: http://www.eenews.net/public/25/9960/features/documents/2009/03/03/document_gw_01.pdf

[20] Casillas, E., *et al,* NOAA-NMFS-NWFSC, **"Estuarine Pollution and Juvenile Salmon Health: Potential Impact on Survival" (2007), available at:** http://www.nwfsc.noaa.gov/publications/techmemos/tm29/papers/casillas.htm**;** Scholz, Nat, NOAA, "Health effects of pesticide mixtures: Unexpected insights from the salmon brain," (AAAS Annual Meeting, Feb. 2008), available at: http://www.eurekalert.org/pub_releases/2008-02/nh-nsa_1021208.php; *see also* NOAA Office of Communications, "New findings on emerging contaminants: Chemicals in our waters are affecting humans and aquatic life" (AAAS Annual Meeting, Feb. 2008), available at: http://www.eurekalert.org/pub_releases/2008-02/s-nfo020808.php.

[21] *See, e.g.*, Letter from California Sportfishing Protection Alliance to Central Valley RWQCB, "California Sportfishing Protection Alliance Comments on Draft Irrigated Lands Regulatory Program - Program Environmental Impact Report" (Sept. 27, 2010), p. 51, available at: http://calsport.org/doc-library/pdfs/31.pdf.

[22] *Id.*

necessary to meet BPTC, and assist the Regional Board in prioritizing enforcement inspections.

- Non-Water Quality Monitoring: All growers would conduct nutrient tracking, pesticide tracking, and implemented tracking of management practices.
- Surface Effluent Quality Monitoring: Within areas where Coalitions are currently required to prepare and implement a management plan, all Tier 2 and 3 farms within that management area that are discharging any pollutant which triggered the management plan, must prepare and implement a discharge monitoring plan for the pollutants governed by the management plan as well as basic parameters that serve as indicators of pollution discharges.
- Groundwater Monitoring: Growers who qualify as Tier 2 or Tier 3 for groundwater pollution should be required to conduct individual monitoring annually as described for the Tier 3 groundwater growers in the PEIR.
- Additional Fee Authority: The State Board must increase current fees to cover all of the costs of the program. It is unreasonable to base a regulatory program regulating the largest source of pollution to Central Valley waters on the political reluctance of the Board or Administration to assess appropriate fees to support a regulatory program that is capable of enforcing statutory and regulatory requirements. The fees for the irrigated lands dischargers, as well as fees on existing NPDES permittees, including stormwater permittees, should also be adjusted to accommodate a separate regional monitoring program.

2. Discharges of Municipal and Industrial Wastewater

Chapter 6 briefly references permits issued pursuant to the National Pollutant Discharge Elimination System (NPDES) and "encourages" the timely development and enforcement of the program without inquiring whether or not the program is working as intended. It's not. Resource constraints and pressure from the regulated community have undermined the integrity of the NPDES permitting program.

Almost two billion gallons per day of wastewater is discharged into the Delta watershed (1.2 BGD in the actual Delta) from some 64 municipal wastewater treatment plants and 62 industrial dischargers. The Central Valley Regional Board is allowing flow limits and, in many cases, the mass loading of pollutants to be increased in many, if not a majority, of NPDES permit renewals. Frequently, these renewed permits allow for increases in loading of pollutants identified as actually "impairing" a water body. For example, in recent years, the Central Valley Regional Board has allowed increased loading of impairing pollutants into the Delta from Stockton, Manteca, Tracy, and Lodi, among others, and even issued a new permit to the municipality of Mountain House to begin discharging impairing pollutants into Old River; one of the most degraded areas of the Delta.

State and federal antidegradation requirements are routinely ignored and, consequently, the Regional Board has little idea of the total mass loading of pollutants in a watershed. For example, the Regional Board issued a permit granting Linda County Water Agency all of the remaining assimilative capacity for salt in the Feather River. Subsequently, Yuba City was granted the same assimilative capacity in their permit renewal.

It is well known that numerous constituents interact additively and synergistically. Many of these interactions are well documented in the scientific literature. Yet, the Regional Board doesn't consider these interactions in developing permit limits.

Under pressure to get NPDES permits issued, the Regional Board has embraced cookie-cutter templates and out-sourced much permit development to individuals far removed from California who are not professional engineers and who frequently lack an understanding of local conditions. NPDES permits issued by the Regional Board now routinely ignore and violate explicit state and federal regulations governing permit issuance and, consequently, are not protective of surface waters and beneficial uses. Attached is an evaluation of the failure of the Regional Board to comply with fundamental permitting regulations.

The Council should recommend that the Legislature increase funding to the water boards to ensure that they have adequate resources to comply with their NPDES permitting mandates. We also strongly urge the Council to recommend that the Regional Board fully comply with NPDES permitting regulations, including antidegradation requirements, and that it address additive and synergistic interactions in developing permit limits. The Council should further require the Regional Board to prepare pollutant specific mass load estimates for the Delta and tributary watersheds and documented estimates of progress should be provided to the Council on a yearly basis.

3. Municipal Stormwater Discharges

Chapter 6 fails to acknowledge or discuss the failure of the municipal stormwater program to reduce mass loading of toxic and impairing pollutants. Examination of stormwater monitoring reports reveals that most stormwater discharged routinely exceeds water quality criteria and is frequently toxic to aquatic life.

Not a single municipality discharging stormwater pollutants into the Delta or its tributaries can document or quantify reductions in the mass loading of pollutants over the last twenty years. Nor has the Central Valley Regional Board incorporated enforceable TMDL waste load allocations developed in TMDLs in recently issued MS-4 permits.

The Council should recommend that the State Water Resources Control Board and the Central Valley Regional Board adopt limits in municipal stormwater permits restricting increases in the mass loading of pollutants. The water boards should provide the Council with a yearly documented update on progress in reducing the concentration, toxicity and mass of stormwater

discharged pollutants, as well as, documentation that enforceable waste load allocations are being included in TMDLs.

4. TMDLs

Chapter 6 focuses much of its discussion, many of its recommendations and a number of its performance measures on the completion of TMDLs. Table 6-1 identifies 27 TMDLs approved and under development in the Central Valley, Delta, and Suisun Bay, and is indicative of the paucity of the Delta Plan's approach to water quality. The identified TDMLs are only the tip of the iceberg; State and Regional Boards are legally obligated to develop and approve literally hundreds of TMDLs.

With several exceptions, the TMDLs in the table address problems that were amply extensively identified 20, 30, even 50 years ago. For example, the pervasive toxicity of diazinon and chlorpyrifos in the San Joaquin River were identified in the late 1980s, low dissolved oxygen in the Stockton Deep Water Channel was chronicled in the early 1960's, and factors causing excessive salinity in the San Joaquin River were documented far earlier. A long string of programs, MOUs, Basin Plan amendments, legislatively mandated Toxic Hot Spot cleanup plans, and toothless waivers litter the historical landscape but the problems continue to plague the Delta and tributary waterways. TMDLs are only the latest programmatic rabbit-hole to avoid the repercussions that would accompany timely direct action.

TMDLs do not ensure compliance with Basin Plan water quality standards. While the "technical TMDLs" adopted by the Central Valley Regional Board tend to be scientifically defensible, crucial implementation plans are sadly lacking. To date, there have been few, if any, documented and quantified reductions in pollutant loading attributable to TMDL implementation. Reduction in loading of organophosphorus pesticides was the result of growers switching to less expensive and more potent chemicals, for which there is little monitoring and no TMDL under development. Treatment plant upgrades in Stockton resulted in reduced ammonia loading to the Stockton Ship Channel but the largest identified sources of low dissolved oxygen remain unaddressed. Although the Grasslands Bypass Project has reduced selenium loading to the San Joaquin River, selenium concentrations in the San Joaquin River continue to routinely exceed the 5-microgram limit at Hills Ferry and the 2-microgram limit in wetland and refuge water supply channels. Existing water quality standards are inadequate and the US Geological Survey (USGS) has concluded that standards may have to be reduced 5 to 50-fold to be protective of aquatic and avian life. Having secured the low hanging fruit, remaining technical obstacles are enormous and uncertain and any solution will cost hundreds of millions of dollars that are not likely to become available.

The poster child for the failure of the TMDL program is the San Joaquin River Salt and Boron TMDL. Salinity problems on the river have been recognized for over a century. Operation of the CVP and SWP exacerbated conditions by importing an estimated 700 thousand tons of salt

annually into the San Joaquin Valley. Some 400 thousand tons of salt migrate to groundwater. Much of this salt enters the San Joaquin River via accretion or direct discharge. The TMDL has been characterized as the first 100-foot TMDL in the nation's history, only protecting a short stretch of river below the San Joaquin's confluence with the Stanislaus River. Water quality violations continue to occur upstream of the confluence and immediately downstream: this despite the fact that EPA regulations and the Central Valley Board's Basin Plan require that standards must apply throughout a water body, not simply at a single compliance point. While TMDL implementation plans must ensure attainment of water quality standards, the salt TMDL contemplates a 19% exceedance of standards in critical years and a 7% exceedance in dry years. The TMDL fails to reserve any assimilative capacity, thus depriving downstream farmers of the ability to legally irrigate and discharge return flows. Although the State Water Board has expressly and repeatedly directed the Regional Board to move the salt compliance point upstream, it has failed to do so.

Even where TMDLs have been adopted they may not be protective. For example, the Methylmercury TMDL is not protective of subsistence fishermen and their families, or those with impaired immune systems, pregnant women, or children.

It is not enough to simply measure progress in protecting water quality by programs initiated or TMDLs completed. We recommend that the Council condition approval of covered actions on inclusion of enforceable implementation plans in TMDLs, including performance measures and interim yardsticks with specific quantifiable load reductions. This should apply to all sources of impairing pollutants, including municipal and industrial stormwater and wastewater and irrigation return flows.

Water bodies must be identified under Clean Water Act Section 303(d) as "impaired" due to low flows, rather than just chemical or biological pollution, so that flows are carefully considered in all Total Maximum Daily Loads later developed to restore the water bodies to health. However, this has yet to be accomplished in the Central Valley Region. As described in extensive comments that were submitted by a coalition of groups, the state must identify and restore water bodies impaired by altered flows, as required by the Clean Water Act.[23] This should be a specific recommendation added to the Plan to begin to ensure its effectiveness. (WQ R8, R9)

5. Grasslands Project and Selenium

It is notable in Table 1 above that selenium is the only pollutant in which water quality objectives are violated more often during the non-irrigation season. This is indicative of the pervasive selenium pollution of the shallow aquifers of the Western San Joaquin Valley

[23] Letter from California Coastkeeper Alliance *et al*. to State Water Resources Control Board, "Notice of Public Solicitation of Water Quality Data and Information for 2012 California Integrated Report" (Aug. 30, 2010), available at: http://www.cacoastkeeper.org/document/ccka-comments-on-2012-303%28d%29-list.pdf. This letter also provides relevant discussion regarding the Clean Water Act requirements to address impaired groundwater that may be threatening hydrologically connected surface water.

mobilized during the wet winter months. The 2010 goal of meeting selenium water quality objectives has passed and the Central Valley Regional Board has extended the time for compliance until the end of 2019, justifying the action because no solution exists. If the BDCP as currently proposed is implemented, a greater percentage of Bay-Delta water will come from the San Joaquin River. As a result, Bay-Delta selenium concentrations and residence time will increase with predictable disastrous biological impacts.

On September 2011, US EPA released scientific documents by the US Geological Survey documenting the existing Bay-Delta selenium water quality standard of 5 micrograms is inadequate to protect Bay-Delta fish and wildlife. The EPA documents provide the basis for changing this toxic standard to a selenium water quality standard of 1 microgram or less. This change is needed to protect economic resources of the Delta Estuary and Bay including salmon, steelhead, sturgeon, and diving birds, and should be a recommendation in the Delta Plan.

Furthermore, the just released Reclamation water quality monitoring reports for the Delta Mendota Canal adjacent to the Mendota Pool on the San Joaquin River confirm selenium violations for five months out of the first six months of 2011. This source water goes to thousands of acres of wildlife refuges, duck clubs, and wetlands in the San Joaquin Valley and is upstream of the Delta. Failure to address this water pollution and monitor the sources has been ongoing for years. The Delta Plan should recommend that the Central Valley Regional Board enforce selenium water quality standards for agricultural polluters.

Reclamation confirms that the west side drainers are no longer monitoring selenium and other pollution that is being discharged into the San Joaquin River below Crows Landing near the Merced River, nor is this pollution being monitored as it travels to and through the Bay-Delta. The Delta Plan should recommend a comprehensive selenium-monitoring program for the Bay-Delta estuary and lower San Joaquin River.

The Bay-Delta Conservation Plan's goal to provide increased water supplies to the heavily subsidized poisoned ground of the Western San Joaquin Valley will further contaminate our fish, wildlife, food, and water supplies with toxic amounts of selenium. Ceasing irrigation of these toxic lands will reduce costly public water, power, and crop subsidies, improve water quality, and decrease the demand for pumping from the Delta. There is no cost effective or technically viable solution other than to stop sending clean water from Northern California and the Sierras to poisoned ground. The Delta Plan should recommend retirement of lands from irrigated agriculture, which creates selenium contamination to the tributaries and aquifers that drain into the Bay-Delta.

Given that no selenium solution exists other than land retirement, the Delta Plan should include a recommendation that the SWRCB convene a Wasteful and Unreasonable Use hearing to revoke water permits used for the irrigation of seleniferous, saline lands which degrade Bay-Delta water quality. The Draft Plan gives the impression that this problem is solved. After a quarter of a

century of studies and legal maneuvering, selenium and other pollutants mobilized by irrigation of the toxic lands of the Western San Joaquin Valley are still not solved.

6. Inadequate or Lack of Protective Water Quality Standards

Many thousands of unregulated chemicals, including pharmaceuticals and personal care products, industrial chemicals, and other potentially hazardous chemicals, are discharged to waterways, including the Delta and its tributaries. Chapter 6 briefly acknowledges the potential toxic and sub lethal impacts from the maelstrom of emerging and industrial chemicals that gather together in the Delta. It's likely that the synergistic and additive interactions of constituents acting on the immune, endocrine, and reproductive systems of aquatic life pose a greater threat to pelagic species than overt toxicity. The Council should do more than simply recommend that the State and Regional water boards conduct special studies of selected emerging contaminates by 2014, it should make the funding and implementation of aggressive suite of such studies a condition of approval of covered actions.

Existing water criteria fails to address many issues that must be considered in considering impacts on aquatic life. For example, during the State Water Board's Delta flow hearing, Dr. G. Fred Lee testified:

> "The current US EPA criteria development approach only considers some and in some cases a small part of the impacts of chemical contaminates on aquatic life. For example, the approach currently used to develop water quality criteria does not include additive/synergistic properties of regulated chemicals that occur in concentration below the water quality criteria allowing unanticipated adverse impacts to aquatic life. Adverse impacts of chemicals to aquatic life that occur for especially sensitive species, such as zooplankton which serve as fish food organism were not included in the development of the water quality criteria. These criteria are only applicable to protecting about 90% of the species. Therefore there could readily be fish species in the Delta and its tributaries that are more sensitive to a chemical than those used to establish the water quality criterion value. There is also very limited information on chronic exposure to sub lethal impacts of a chemical and mixtures of chemicals to fish populations. Another issue is that other stressor such as low DO, ammonia etc. that can impact the lethal and especially sub lethal impacts of chemicals. It has been well known for over 40 years through biomarker studies that fish and other organisms show organism biochemical responses to chemical exposures at concentrations well below the water quality criterion. The significance of these biomarker responses to an organism or group of organisms is largely unknown. Chemicals can adversely impact the health of the fish and other aquatic life that weaken their ability to resist adverse impact of stressors such as low DO, elevated

temperature and predation as well to disease. It's been known for over 40 years that very low levels of copper affect the "breathing" rate of some fish.[24]

Developing more protective water quality standards is likely to be technically difficult, expensive and time consuming. More immediate benefits are likely to be achieved by reductions in the mass loading of pollutants to surface waters. We reiterate our previous recommendation that the Council should require the Regional Board to prepare pollutant specific mass load estimates for the Delta and tributary watersheds and documented estimates of progress should be provided to the Council on a yearly basis.

Chapter 6 notes that there are impairments in the Delta that are caused by total organic carbon, nutrients and other contaminates for which there are no federal or state water quality criteria. We recommend that the Council go farther than simply recommending that the water boards develop and adopt criteria for nutrients by 2014 and make the adoption of criteria a condition of approval of covered actions.

Recommendation 9 calls on the Water Boards to "conduct or require special studies of pollutants including selected emerging contaminants." However, this Recommendation fails to note how this effort would be different than the review already being conducted by the State Board and its contractors.[25] Furthermore, there is no mention of utilizing existing monitoring results as a foundation for preventative actions and enforcement of existing standards to prevent further degradation of drinking water supplies, higher treatment costs, and damage to ecosystem habitat, and preventing harm to other beneficial uses. A meaningful Recommendation would have considered the work already being undertaken, evaluated it for potential weaknesses, and provided useful guidance on where additional work is required. (WQ R9)

Of the approximately 100,000 chemicals registered for use in the United States, only about 200 are regulated with respect to water quality. The Priority Pollutant List is an artifact of a legal settlement several decades ago, has never been peer reviewed and is an inadequate surrogate for the maelstrom of chemicals found in our waterways today. Further, degradants, a product of chemical breakdown in the environment, are little understood but are often highly toxic. We recommend that the Council urge U.S.EPA and the State and Regional Water Boards to upgrade the Priority Pollutant List through a scientifically defensible process.

7. Drinking Water Quality

We support recommendations WQ R1, WQ R3, and WQ R4 and take no position on WQ R2. We believe that WQ R5 (CV-SALTS) while an interesting concept, will cost many billions of

[24] Lee, G. Fred. 2010. Comments on Water Quality Issues Associated with SWRCB's Developing Flow Criteria for Protection of the Public Trust Aquatic Life Resources of the Delta, 11 February 2010. Page 3. Available at http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/exhibits/cspa/cspa_exh22_lee_test.pdf

[25] *See* http://www.sccwrp.org/ResearchAreas/Contaminants/ContaminantsOfEmergingConcern.aspx.

dollars and is serving as a rabbit-hole to justify a failure to pursue imposition of regulatory requirements and numerous near-term efforts that would result is significant reductions of salt loading. Effective regulatory enforcement would likely be more effective in achieving significant near-term reductions of salt loading. We recommend the Council add quantitative yardsticks to this recommendations and condition approval of covered actions on compliance with those yardsticks.

Other aspects of the Drinking Water Quality section of the plan are inadequate. While we appreciate the paragraph referring to the problem of nitrate contaminated drinking water for low-income communities, no connection is made between this observation and the larger issue of controlling salinity. The section also ignores the problem of nitrates for large communities, particularly in the North Valley. Both Ripon and Modesto, for example, report having to close several wells due to nitrate contamination in the last 10 years, and both are either using or seeking surface water to supplement the lost yield. The Delta Plan must establish a clear connection between water supply and water quality and again specify quantitative yardsticks to measure progress.

8. Lack of Timetables, Yardsticks, Performance Measures, and Consequences

Given the extensive information on pollution impacts in the Delta, a credible Delta Plan must provide the yardsticks to evaluate progress (including mass loading reductions), end points, and citizen enforcement tools to hold all polluted discharges to account, and provide consequences for failure. Chapter 6 fails to do this. Rather, it simply restates existing efforts and suggests (without mandates or accountability) future efforts that may or may not be undertaken. For example, WQ Recommendation 6, the first Environmental Quality recommendation, simply references the fact that the State and Regional Boards "are currently engaged in regulatory processes, research, and monitoring" and recommend only "these ongoing efforts be completed and if possible accelerated."

The Delta ecosystem and beneficial uses that the estuary supports cannot be restored without compliance with water quality standards. Monitoring results need to trigger automatic actions prior to violating the standards to prevent irreversible ecosystem damage and degradation of beneficial uses. (WQ R1)

Specific quantifiable timetables, yardsticks, performance measures, endpoints, and consequences for failure are the necessary drivers of any meaningful plan that realistically expects to achieve the coequal goals and improve water quality. We recommend that the Council recommend inclusion of these specific measures in all programs and projects related to salinity, drinking water quality, and environmental water quality and condition approval of covered actions on their inclusion. This should apply to all sources of pollutants including point and nonpoint discharges.

CHAPTER 7 – REDUCE RISKS IN THE DELTA.

In general, the Fifth Draft Delta Plan contains a number of good policies and recommendations to reduce Delta flood risks that we agree will be beneficial. What is needed is a partnership with local, state, and federal agencies to reduce flood risks.

1. The planning, implementation, monitoring, and evaluation of all Delta levee and floodplain improvements shall include consultation and maximum feasible participation by those living in the Delta. (RR R1 thru R12)

2. The Council should require the PL 84-99 levee standard (Class 3 in Table 7.1) or higher classes of levee standards contain a 22-foot crown width as a minimum for all delta levees. A 22-foot crown width in lieu of the 16-foot crown is recommended as a means to accommodate raising levees to meet sea level rises greatly in excess of the rates experienced in the last 300 years and to allow two-way passage of trucks in the event of a flood. The Delta Plan should identify levees that don't meet PL 84-99 criteria and develop a plan for reviewing them to determine whether they should be improved and improving the selected levees during a phased timeline. (RR R4)

3. The Delta Stewardship Council should accept and support as a covered action in the Delta Plan the Delta Protection Commission's recommendation in their Economic Sustainability Plan to: "Improve many core Delta Levees beyond the PL 84-99 standard that addresses earthquake and sea-level rise risks, improve flood fighting and emergency response, and allow for vegetation on the water side of levees to improve habitat. Improvement of most core Delta levees to this higher standard would cost $1 to $2 billion. While this is a longer-term program, planning should be initiated immediately."[26] (RR R3 thru R7)

    - There is a plausible public interest in providing public funds to Delta reclamation districts and other Delta interests for levee upgrades because the Delta serves as the water conveyance facility for much of California. Water exporters should be required to identify which levees, if any, ***they want to fund to a higher standard*** (for example more earthquake resistant) to protect their water supply, beyond the current standards. Recommendations should also include assisting Delta counties and communities in meeting FEMA/NFIP programs. The plan should also contain a recommendation to support and increase public funding for permanent continuation of existing and highly successful statutory cost-share formula and funding for Delta (Subventions) Levee Program. Public safety and flood protection must remain the top priority of the State Plan of Flood Control, including its levees and bypasses. (RR R# thru R7)

    - Because earthquake risks to the levees are one of the main justifications for a Peripheral Canal or Tunnel in the Delta, and there is evidence that the earthquake risks to the Delta levees may have been exaggerated in previous drafts of this report,

[26] Delta Protection Commission. Second Draft Economic Sustainability Plan, July 21, 2011. Chapter 11, Page 222. http://www.delta.ca.gov/res/docs/ESP%20(2)%20Ch%2011.pdf

the comparison of costs of the two alternatives ($1-2 billion for levee strengthening versus $15-$16 billion for new conveyance) is significant and should be incentive enough to immediately initiate this levee reinforcement program and make catastrophic levee failure a questionable justification for new conveyance. The comment "Delta levees are fragile' may be refuted by the fact that there has been a reduction in the number and severity of Delta levee failures since 1988. (RR R5)

4. We concur with the Policies shown in this Chapter (RR P1 thru RR P4)

5. We agree that there should be support for Delta dredging to improve flood conveyance and to provide material for levee maintenance or subsidence reversal in the Old River, Middle River and the South Fork Mokelumne. However, we have concerns about the environmental impacts from deepening the Sacramento Deepwater Ship Channel and the Stockton Deepwater Ship Channel and we reserve judgment pending comprehensive environmental review and full mitigation. (RR R2)

6. We agree in general with the concept of identifying lands that will be needed for flood control improvements including setback levees. We also agree with the importance of identifying and setting aside these lands. However, the locations for flood control improvements have yet to be identified which creates uncertainty in land use decisions and in the absence of that knowledge, private and public land use decisions may foreclose opportunities for flood control improvements in the future. Until these decisions are made, it creates burdensome uncertainties for Delta residents and communities. Therefore we urge the Delta Stewardship Council to identify these areas sooner rather than later in order to provide land use certainty to residents and local government. (RR R4)

7. We agree that the Delta Stewardship Council should convene a working group to develop and evaluate recommendations to DWR to address appropriate actions to both routine and catastrophic levee failure. We also recommend that the working group include development of recommendations for local Delta agencies as well. (RR R7)

8. We partially agree with the recommendation for termination of state leases on Delta lands subject to subsidence. However, every effort should be made to work with farmers to keep Delta lands in agricultural production. The purchase by the State and non-profits of Delta islands such as Twitchell and Sherman and elimination of agricultural activities in some of those areas negatively impacts the Delta economy. Termination of state leases should be a last resort if a farmer is completely unwilling to participate in practices and programs to halt or reverse subsidence on Delta islands. In the event a lease is terminated, every effort should be made to find a lessee who will keep the land in production who will work to reverse and eliminate subsidence. An alternative consideration should be a 400-foot easement around Delta levees and adoption of policies to add more fill behind Delta levees to reinforce them. (RR R11)

9. We concur with each of the other Recommendations in this Chapter (RR R1, R3, R5, R6 and R12.)

CHAPTER 8 – DELTA AS AN EVOLVING PLACE.

While our coalition is in general agreement with the majority of recommendations that are presented in this chapter, we feel that it has serious overall shortcomings and oversights. They are: a lack of specifics or quantitative data by which performance can be measured; no recognition that water quality and improved water flows through the Delta are an integral part of the Delta as Place; the absence of integral involvement of Delta residents and Delta communities in the planning for the Delta's future. No one can fully understand the "Delta as Place" without living there and experiencing the unique place that it is. In this present draft, Delta communities are described as theme park type of small towns rather than the working communities that they are. Furthermore, recreation and tourism are given more weight than agriculture, when agriculture is the primary economic activity within the Delta. Without comprehensive and meaningful involvement of Delta residents, there cannot be a Delta Plan that will be favorably accepted or that can be successfully implemented. In short, this chapter has not provided the focus on the Delta that it deserves.

When comparing the co-equal goals with the object of Congress in granting swamp lands to the states (1850 Swamp and Overflow Land Act), the co-equal goals should be consistent with *increasing the general prosperity* of the Delta, as required by the Act. The reflooding of Swamp and Overflowed Lands, the deprivation and degradation of the water supply to such lands, and other acts of the State detrimental to the productivity and prosperity of such lands is clearly inconsistent with the State's obligation to carry out the purpose for which the lands were granted to the State.

Additionally, Water Code Sections 12200 - 12205 are specific as to the requirements to provide "adequate water supply in the Delta sufficient to maintain and expand agriculture, industry, urban and recreational development". An evolving Delta consistent with Water Code Section 12201 is one which maintains and expands agriculture, industry, urban and recreational development. The Delta as an evolving place is to be positive not negative. The Sacramento-San Joaquin Delta Reform Act of 2009 cannot be properly interpreted to allow harm to the future prosperity of the Delta.

Other important considerations that must be an integral part of the Delta Plan are:

1. The Delta Protection Act of 1992, which was enacted to prevent inappropriate or excessive conversion and urbanization of farmland in the Primary Zone of the Delta. The Delta Plan must take this important point into consideration.
2. The Delta Protection Commission's Land Use & Resource Management Plan which identifies agriculture as the primary land use in the Delta and seeks to protect its economic production throughout whole Delta. Between 1984 and 2008 almost 560,000 acres of Prime Farmland was lost or converted statewide due to urbanization, low density rural residences, mining, and ecological restoration projects. This statewide loss is equal to the size of Solano County, and should be avoided when possible by focusing on government lands and existing habitat areas that could be improved to benefit additional species.

3. Other local plans such as Suisun Marsh Habitat Management Plan, Delta County HCPs, and Yolo Bypass Wildlife Area Land Management Plan must be factored into the Delta Plan, including many other local plans that have spent years and millions of dollars to develop and manage.

4. A recognition of the high level of uncertainty associated with BDCP Conservation Measures and recent criticism from the National Academy of Sciences for critical gaps in science, which should necessitate a cautionary approach by the Delta Stewardship Council to endorse or support widespread farmland conversion to habitat that will have significant economic impacts to the area.

5. Although a new water conveyance system is being planned by BDCP, it may never be completed or permitted, or may be stalled for decades due to litigation (the legal dispute between Sacramento County and EBMUD lasted 40 years before resulting in the new Freeport diversion facility. Therefore, the Delta Plan should include strategies on how to improve the co-equal goals if the new water conveyance facilities are delayed or not constructed.

6. The Delta Plan should not only focus on the amount of additional habitat to be restored, but should first prioritize increased management and functionality of existing habitat restoration areas that were completed in preceding years, before converting more farmlands to habitat. Over the last several decades, numerous habitat projects have been funded and constructed in the Delta, but after several years, many of these existing projects are experiencing neglect due to lack of adequate funding to manage and monitor them for species benefits. The Delta Plan should also focus on how habitat areas can be integrated into current and evolving agricultural lands.

7. The Delta Plan should set forth policies and recommendations for safe harbor agreements, good neighbor policies, and a secured endowment to cover any future claims for damages to property owners resulting from habitat restoration in the Delta.

8. The Delta Plan should reiterate the Delta Conservancy's mandate that land will be required for restoration purposes only from willing sellers. In addition, the Delta Plan should call for additional applied science and economic analysis of the tradeoff of terrestrial habitat for additional aquatic habitat, which may be good for water export permits but harmful to Delta communities.

9. The Delta Plan should create a long term funding mechanism for dealing with public nuisances if recreation is to be promoted as a greater economic driver within Delta communities. Funding needs to be secured to handle public safety issues, littering, theft, vandalism, and vagrancy for Delta landowners, as present levels of law enforcement are woefully inadequate to address any increases in tourism.

10. The Delta landowners and economy should not have a disproportionate burden for Delta fixes that intended to benefit statewide interests. Therefore, securitized endowment funding should be recommended for: fish screening and consolidation of existing intakes;

loss of local tax revenue and assessments; third party impacts; and maintenance of restored habitat areas.

There must be recognition of tribal cultural use of the Delta as a major trading place and center of many tribal community ceremonial places as well as the need and respect for the Delta as the transformation place of salmon from fresh water to salt and back again. The Plan fails to include tribal interests in the Delta and the importance of the waters to lifeway and salmon habitat restoration and continuance.

Our responses to your individual recommendations are:

1. We concur that the Delta Protection Commission's Economic Sustainability Plan should include recommendations on public safety, economic goals and policies, updates to DWR's flood management plans, and encouragement of recreational investment. (DP R1)

2. We agree that The Delta Protection Commission should initiate recommendations related to designation of the Delta and Suisun Marsh as a National Heritage Area. (DP R2)

3. We agree that The Department of Transportation should partner with local cities and counties to establish major gateways and improve access. (DP R3)

4. We agree that The Department of Parks and Recreation should develop funding sources and partner with other state and federal agencies, counties, conservancies, and nonprofits to conduct recreation use surveys as indicated in the Plan. (DP R4)

5. We support that The Department of Fish and Game's collaboration with other organizations to expand recreational opportunities. (DP R5)

6. The Department of Boating and Waterways should certainly coordinate with the U.S. Coast Guard and state and local agencies on an updated marine patrol strategy for the region. (DP R6)

CHAPTER 9 – FINANCE PLAN.

1. As stated in the cover letter to these comments, Public Trust balancing must be incorporated into all aspects of a Delta Plan, especially in the economic analyses that must be an integral part of the Financial Plan. (FP P1)

2. Based on the BDCP Costs shown on Page 209, Water Conveyance Costs (the Water Supply Reliability portion of the Co-Equal Goals) are 70% of total project costs. This represents a wide disparity in the legislatively mandated Co-Equal goals for Water Supply and Delta Ecosystems Restoration. This very unequal apportionment of project costs by BDCP is the clearest indicator that increasing water supply is the overriding objective of the BDCP sponsors and that ecosystems restoration will never be an equal goal. This discrepancy needs to be communicated by the Council to the BDCP as an indicator that the eventual DEIR produced by BDCP will not meet the legislative requirements set for the "Co-Equal Goals." (Version 2.1)

3. Under the category of "Immediate Needs," please include "public health" as requiring urgent expenditures. The Pacific Institute report cited in Chapter 6 identifies a need for capital infrastructure for communities with nitrate contamination at $150 million, but urgent expenditures are needed for interim solutions, including operation and maintenance of treatment systems, and funding for point-of-use or point-of-entry. No funding is available for either of these options to provide safe drinking water in the short term. (Page 208, line 17)

4. The call for DWR to develop an assessment of the state's water infrastructure needs through the California Water Plan is a guarantee that water quality will be slighted. Unlike DWR, both the State Water Board and the Department of Public Health develop regular Needs Surveys for wastewater and drinking water infrastructure. These surveys and the Project Priority List for the Drinking Water State Revolving Fund should inform any needs survey. While this recommendation currently looks at small-scale storage and conveyance projects, it ignores basic investments like water meters, replacement of leaking pipes, and conservation incentives for residents of small water systems. (FP R5)

5. Despite the objections to Diversion Fees expressed in previous Draft Delta Plans, we recommend that the Council continue exploration of a water diversion fee and a Delta export fee by the Council and the State Water Resources Control Board. The top priority of such diversion and export fees should be to support ecosystem restoration efforts. This system of fees is founded on the responsibility of all water users under the public trust to contribute to ecosystem restoration. Development of these fees should consider the following: (FP R6, R8, R10)

    - Long-term habitat restoration and species recovery funding required to achieve the co-equal goals.
    - An appropriate share of public funding for ecosystem restoration efforts, as well as likely state and federal funding, given the pressures on the state and federal budgets.

- Contributions by water users to other system-wide ecosystem restoration efforts. Site specific, water agency local mitigation costs (e.g. the installation of fish screens) should not be considered for crediting in the development of these user fees.
- These water fees should not be used for the purchase of water to achieve compliance with regulatory requirements, as was the former CALFED Environmental Water Account.

6. The development of information related to financing (such as the identification of beneficiaries and stressors and detailed financing scenarios) should be undertaken simultaneously with the development of major capital decisions, in order to inform planning efforts. The Council should assure that this is being accomplished by the BDCP in order for BDCP to be able to produce a plan that is consistent with the requirements of a Delta Plan. Development of finance plans should not be delayed until the conclusion of capital planning efforts. (FP R6, R8, R10)

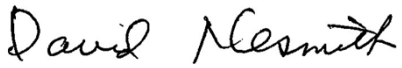
    - We note that the word "Framework" has been added to this chapter title with the introduction of the Third Draft. While we understand that: "Many of the policies recommended in the Delta Plan will not be fully developed and more detailed costs will be determined at a later date" (from the Second Draft), we recommend that as much detail as possible on alternative costs be included in the Draft EIR; presenting only a *framework* for a finance plan will not be adequate.

7. The primary purpose of a public goods charge should be to fund investments in efficiency, water recycling, groundwater clean-up, stormwater capture, and other tools that can reduce reliance on imported supplies. (FP R12)

8. A public goods charge could ensure a minimum investment by all urban and agricultural water agencies in water user efficiency and other tools that can reduce reliance on imported water. It could also provide consistent funding over time. (FP R12)

9. The CPUC's recommended water public goods charge is focused on water efficiency – broadly defined -- including agricultural and urban water use efficiency, water recycling, stormwater capture and groundwater clean-up efforts, and resulting surface water quality impacts. We recommend that the Delta Plan require a volumetric approach to such fees as well as contributions by both agricultural and urban water users. (FP R12)

10. Finally, the Council needs to expand its vision on fee possibilities. A Water Resources Renewal and Protection fund should be established that places a volume fee on both water exported and discharged. These fees need to go to more than just conservation efficiency projects. Funding needs also to include watershed protection projects throughout the Sierra, the Coastal Regions, and other suitable areas of the state.



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Capt Brian Cutty
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Capt Brian Guiles
Flying Fish Charters

Capt Chris Acacelo
Chris's Fishing Charters

Capt Chris Chan
Ankeny St. Sportfishing

Capt Chris Duba
Silver Fox Charters

Capt Craig Shimokosu
New Salmon Queen Charters

Capt Dale Walters
Que Sera Sera Charters

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Fish'n Dan's Guide Service

Capt David Ryan
Caroline Charters

Capt Dennis Baxter
New Captain Pete Charters

Capt Don Franklin
Soleman Sportfishing Charters

Capt Ed Gallia
New Easy Rider Charters

Capt Frank Rescino
Lovely Martha Charters

Capt Harry Necees
Checkmate Charters

Capt Jack Chapman
Lovely Linda Sportfishing

Capt Jacky Douglas
Wacky Jacky Charters

Capt James Robertson
Outer Limit Charters

Capt Jay Yokomozo
Huck Finn Charters

Jimmy Robertson
Outer Limits Charters

Capt Joe Gallia
El Dorado III Charters

Capt John Atkinson
New Ray Ann Charters

Capt John Kluzmier
Sir Randy Charters

Capt Ken Stagnaro
Stagnaro's Charters

Capt Nick Lemons
Star of Monterey Charters

Capt Peter Bruno
Randy's Fishing Trips

Capt Randy Thornton
Telstar Charters

Capt Richard Thornton
Trek II

Rick Kennedy
Tight Lines Guide Service

Capt Rick Powers
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Capt Robert Gallia
El Dorado Charters

Capt Sean Hodges
Hog Heaven Charters

Capt Steve Talmadge
Flash Sportfishing Charters

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ATTACHMENT I
A SAMPLING OF RESOURCES AND BEST PRACTICES FOR PUBLIC TRUST ECONOMIC ANALYSES
ENVIRONMENTAL COALITION COMMENT LETTER TO THE FIFTH DRAFT DELTA PLAN

1. The U.S. Water Resources Council's *The Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G)*. The *P&*G helps federal agencies plan water-related projects. It's somewhat out of date but the National Research Council of the National Academies' review of proposed changes to the *P&G* contains valuable insight into current best economic practices.[27]
2. The California Department of Water Resources (DWR) developed the *Economic Analysis Guidebook (Guidebook)* in 2008 to address deficiencies in the *P&G*. The *Guidebook* employs up-to-date methods and describes the environmental consequences, social effects, and monetary and non-monetary costs and benefits of water-management alternatives economics.[28]
3. DWR has also developed a 2005 four-part study that describes the importance of considering the full range of economic costs and benefits of public policies that affect aquatic resources.[29]
4. The U.S. Environmental Protection Agency (EPA) released the third edition of its *Guidelines for Preparing Economic Analyses (Guidelines)* in December 2010.[30] It accounts for new literature published since the last revision and brings the *Guidelines* consistent with current best economic practices. The latest update includes detailed recommendations on identifying and describing baseline conditions that would exist with and without a proposed policy revision or regulation and an expanded description of methods of defining and valuing ecological benefits of projects and policies that protect natural resources.

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[27] National Research Council of the National Academies. 2010. *A Review of the Proposed Revisions to the Federal Principles and Guidelines Water Resources Planning Document*. Committee on Improving Principles and Guidelines for Federal Water Resources Project Planning, Water Science and Technology Board, Division on Earth and Life Studies.

[28] California Department of Water Resources (CDWR). 2008. *Economic Analysis Guidebook*. The State of California. January.

[29] California Department of Water. 2005A. *Ecosystem Valuation Methods. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May. 2005B. *Natural Floodplain Functions and Societal Values Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May. 2005C. *Middle Creek Flood Ecosystem Restoration Project Case Study: Benefit and Cost Analysis*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May. 2005D. *Floodplain Management Benefits and Cost Analysis Framework. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. June.

[30] National Center for Environmental Economics. 2010. *Guidelines for Preparing Economic Analyses. U.S. Environmental Protection Agency*. EPA 240-R-10-001. December.

5. EPA's Science Advisory Board (SAB) has also released a report titled, *Valuing the Protection of Ecological Systems and Services* in May of 2009.[31] The report describes methods of identifying and describing the economic significance of natural resources and associated ecosystem services affected by policies or projects. The SAB noted the importance of valuing ecosystem services using up-to-date economic methods, and promoting collaboration among social scientists and biophysical scientists. Many of the recommendations have relevance to assessing the economic effects of water allocations in the Delta.
6. EPA also has prepared a guide for assessing cost-effectiveness and cost-benefit analysis for groundwater programs.[32]
7. Even a cursory review of widely used textbooks and the scientific literature reveals numerous approaches and tools that meet generally accepted and prevailing standards of practice for evaluating alternative approaches and balancing public trust uses with other beneficial uses of scarce water supplies.[33]

[31] Environmental Protection Agency (EPA) Science Advisory Board. 2009. Valuing the Protection of Ecological Systems and Services. EPA-SAB-09-012. May.

[32] U.S. Environmental Protection Agency (EPA). 1993. *Guide for Cost-Effectiveness and Cost-Benefit Analysis of State and Local Ground Water Protection Programs*. U.S. Environmental Protection Agency, Office of Water, and Office of Ground Water and Drinking Water. April.

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February 2, 2012

VIA E-MAIL and CERTIFIED MAIL RETURN RECEIPT REQUESTED

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Re: *California Sportfishing Protection Alliance (CSPA), California Water Impact Network (CWIN), AquAlliance, and the Pacific Coast Federation of Fisherman's Association's (PCFFA) Comments to the Draft Delta Plan Program Environmental Impact Report*

Dear Ms. Macaulay,

Thank you for this opportunity to provide comments on the Draft Delta Plan Program Environmental Impact Statement ("DPEIR") regarding the Delta Plan ("Plan") issued in November 2011. These comments represent the comments of the California Sportfishing Protection Alliance (CSPA), the California Water Impact Network (CWIN), AquAlliance, and Pacific Coast Federation of Fisherman's Association (PCFFA) (hereinafter, collectively referred to as ("the Groups"). The groups urge the Delta Stewardship Council ("DSC" or "Council") to reject the DPEIR as proposed because the DPEIR fails to consider many potentially significant environmental impacts of the Plan and alternatives to the Plan, and otherwise fails to meet the requirements of the National Environmental Policy Act and the regulations of the Council on Environmental Quality implementing it ("NEPA")[1], the California Environmental Quality Protection Act pursuant to California Public Resources Code sections 21000 *et seq*. ("CEQA"), the Clean Air Act ("CAA") the Federal Reclamation Act of 1902, the Clean Water Act ("CWA"), the Coastal Zone Management Act, the Omnibus Appropriations Bill, the Central Valley Project Improvement Act of 1992 and numerous other statutory and common law provisions described in greater detail below.

The Role of the Delta Stewardship Council in Shaping the Delta Plan

The Sacramento-San Joaquin Delta Reform Act of 2009 ("Delta Reform Act") established a suite of requirements for the Delta Plan ("Plan" or "project"). These requirements

[1] 40 USC §4321, *et seq.* and 40 C.F.R. Parts 1500-1508 Council on Environmental Quality Guidance

are framed by the Water Code's "basic goals" for the Delta; first among these is to "[a]chieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem," which closely tracks the second "basic goal" to "[p]rotect, maintain, and, where possible, enhance and restore the overall quality of the Delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities." (Wat. Code § 29702; *see also* Wat. Code § 85054.) The pursuit of these goals must conform with the Legislature's determination that "[t]he permanent protection of the Delta's natural and scenic resources is the paramount concern to present and future residents of the state and nation." (Wat. Code § 85022(c)(2).) The Delta Plan created and directed the Delta Stewardship Council (DSC) (an independent agency of the state created by SBX7 1) to develop a legally enforceable Delta Plan to achieve the coequal goals of "providing a more reliable water supply for California" while "protecting, restoring, and enhancing the Delta ecosystem" in a manner that "protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." (Water Code Section 85054). The Act also established a state policy of promoting regional self-reliance and reduced reliance on the Delta in meeting California's future water supply needs. The objective of the DSC is to "...develop, adopt, and commence implementation of the Delta Plan by January 1, 2012." (Water Code Section 85300).

The groups are particularly concerned that the DPEIR contains inadequate description of the overall program, discussion and analysis of the "Project" overall, fails to address many baseline environmental conditions, and inadequately evaluates feasible alternatives and the "no project" alternative. At a minimum, the DPEIR must set forth basic costs and clearly defined baseline conditions so that the Proposed Program can be measured against the various Alternatives, which it does not do. The DSC further fails to define and quantify the following terms: 1) a "more reliable water supply," 2) "protecting, restoring, and enhancing the Delta ecosystem," 3) "enhancement of the Delta as an evolving place" and 4) "regional self-reliance" and "reduced dependence on the Delta." By failing to define what is meant by the foregoing terms, the DSC is incapable of quantifying, analyzing and balancing the goals and policies outlined in the Delta Reform Act. These failures undermine and sabotage efforts to resolve California's water crisis.

For example, the failure of the DSC to define and quantify what a "reduced dependence on the Delta" would look like makes it impossible to determine the extent to which the Delta is currently over appropriated. As it is, consumptive water rights issued by the State Water Resources Control Board (State Board) exceed unimpaired flow into the Delta; state and federal water project contracted water deliveries are greater than available supplies and the delivery capacity of the systems; increased pollutant mass loading to the estuary has exhausted assimilative capacity and exacerbated water quality degradation; and excessive diversions have led to the collapse of estuary's biological tapestry. Two recent state agency reports, [2] which were developed through extensive public processes, conclusively establish that an increase in Delta outflow is necessary to protect and restore the estuary's aquatic ecosystem. In other words, California's water system is seriously oversubscribed, operating in deficit, and is thus incapable of meeting competing demands on the system. The DSC's charge is to resolve this imbalance. In the near term, it's largely a zero sum game, as more water to protect public trust values

[2] State Water Resource Control Board. August 2010. *Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem*; California Department of Fish and Game. November 2010. *Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta.*

translates to less water for consumption values. Over the longer term however, through improved efficiencies, conservation, reclamation, reuse and improved storage and diversion methods, water shortages would be largely alleviated. The DSC cannot avoid having to make difficult decisions regarding the distribution of limited water resources. Sadly, the Fifth Draft of the Delta Plan fails to provide the structure and information critically necessary to make intelligent but painful decisions, with the DSC resorting to gamesmanship to maintain an over appropriated status quo.

The DSC Plan and the DPEIR Fail to Analyze The Delta Plan In Light of The Public Trust Doctrine.

"The longstanding constitutional principle of reasonable use and the *public trust doctrine* shall be the foundation of state water management policy and are particularly important and applicable to the Delta." Water Code Section 85023. As an agency of the state of California, the DSC is creating a 100 year plan that must conform with CEQA statutes, regulations, guidelines and California case law to analyze the plan.

The California Supreme Court last visited public trust law in the seminal case of National Audubon Society v. Superior Court of Alpine County, 33 Cal.3d 419 (1983) in which the court held that the state has "an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust whenever feasible." The Supreme Court further quoted, with favor, now Justice of the 3rd Appellate District Ron Robie, that "the requirements of the California Environmental Quality Act (Public Resources Code 21000 et. seq.) impose a similar obligation." In keeping with the Supreme Court ruling, the state must take the public trust into account in the Delta Plan. The Delta Plan functions as a strategic document which provides guidance and recommendations to cities and counties, as well as state, federal, and local agencies on how to restore the Delta ecosystem and provide a more reliable water supply for California. The plan contains regulatory policies and establishes a certification process for proposed projects to ensure that they comply with the Delta Plan. The plan further envisions the incorporation of other "completed" plans into the Delta Plan, thereby "certifying" that proposed plans, projects, and covered actions are consistent with the Delta Plan.

The planning and allocation of limited and oversubscribed resources implies that there has been an analysis and balancing of the competing demands on these resources. Inexplicably, the Fifth Draft of the Delta Plan makes no effort to balance the public trust and resolve these competing demands for limited resources. The Fifth Draft of the Plan contains no water availability analysis that would show, at a minimum, what water will be available to meet the Reform Act's goals. Such an analysis would have to include an evaluation of the existing seniority-based water rights system, an assessment of real vs "paper" water and area of origin statutory restrictions, and a discussion of the public trust doctrine. The Plan and its DEIR do none of these things. The DSC plan will guide the Bay/Delta activities for 100 years. It is time to use CEQA in a real analysis of the plan before finalizing what could be a mistake that would haunt California water policy for decades. These deficiencies alone fall short of the statutory requirements of the Delta Reform Act and do not comport with the state's requirements to consider the public trust doctrine as held in Mono Lake.

The DSC denies that it has any affirmative duty to analyze whether the plan protects the public trust in the Bay/Delta. However, the DSC, as an agency of the sovereign state of California, has an affirmative duty, inherent in the public trust doctrine, and made a specific duty

by the California Supreme Court in Audubon, to evaluate and compare the proposed alternatives to see if, and how completely, each of the alternatives satisfy the public trust in the Delta. The Legislature has expressly declared that "*permanent protection* of the Delta's natural and scenic resources is the *paramount* concern to present and future residents of the state and nation." (Wat. Code, § 85022(c)(3) (emphasis added).) Thus the Legislature, like the Supreme Court in the *Bay-Delta Programmatic EIR* case, has expressed a *preference* for public trust values, using the word paramount. The plain meaning of "paramount" is the "highest in rank or jurisdiction, chief; pre-eminent; supreme." (Webster's Dictionary). Because that legislative determination cannot be characterized as unreasonable, and is supported by other policies of the Delta Reform Act, the Legislature's implementation of the public trust by the preference expressed in section 85022, subdivision (c)(3) must be honored by the DSC. (*California Trout v. State Water Res. Control Bd.* (1989) 207 Cal. App. 3d 585, 624-625, 629-631.) Here, however, the DSC and the DPEIR do no public trust analysis, because the DSC incorrectly insists that the duty to evaluate the effects of the Delta Plan on public trust resources is not within their purview, even though the Delta Reform Act mandates that the public trust and the doctrine of reasonable use are "particularly important and applicable to the Delta." The groups dispute the DSC's position that an analysis of the public trust doctrine is unwarranted, and request an analysis of whether it is feasible to protect the trust under each of the proposed alternatives. The groups further incorporate the DPEIR comments of the firm of Rossman and Moore, as if set forth herein in full, on the issue of whether or not, and how, to legally evaluate the public trust at the planning stage of the DSC process.

Deficiencies in the Plan's "Area of Origin" Water Rights Analysis

The California Legislature has created a variety of Water Code provisions to protect the area of origin water rights of Californians living in the state's wet areas. These area of origin rules include the Watershed Protection Act, Water Code sections 11460 through 11463; the County of Origin protection, Water Code section 10500; the Delta Protection Act, Water Code sections 1220 through 12204; and the protected area provisions, Water Code sections 1215 through 1222. Generally speaking, these statutes mandate that large-scale water transport systems, like the CVP and the State Water Project, not deprive an area where water originates of the prior right to all water reasonably required to adequately meet the beneficial needs of the area and its inhabitants.

During the Central Valley Project Act's legislative process, area of origin residents insisted the Act contain provisions guaranteeing they have first access to water originating in their area. Residents argued that excess water should only be exported to drier areas of the state once area of origin residents received their water. The legislature addressed these concerns in several key provisions of the Act, now codified as California Water Code sections 11460-11463. These provisions, known as the "Watershed Protection Act" ostensibly gave inhabitants of the watersheds of origin priority over out of area users:

> In the construction and operation by the [Department of Water Resources] of any project under the provisions of this part, a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, *shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial*

> *needs of the watershed, area, or any of the inhabitants or property owners therein.*

Water Code Section 11460 (emphasis added).

These state watershed protections apply to the federally operated CVP pursuant to 43 U.S.C. § 383 (2006); *California v. United States*, 438 U.S. 645, 678 (1978) (federal Reclamation projects must comply with state water law.) The Delta Protection Act of 1959 further requires that the coordinated operations of the CVP and SWP maintain water quality standards and, in doing so, prohibits any person, corporation or government agency from diverting water to which local users of Delta water are entitled from the channels of the Sacramento-San Joaquin Delta. "Protected areas" are also statutorily safeguarded from plundering by out of area demands through a series of statutes commonly known as the "protected areas" statutes of 1984, which expressly prohibit water exporters from depriving designated protected areas of the prior right to water reasonably required to adequately supply the beneficial needs of the protected area. These numerous protections enacted since 1927 evidence the California Legislature's commitment to protecting area of origin residents' access to local water prior to the exportation of that water to drier areas of the state.

The DSC failed to take into account the water needs of water rights holders within the Delta watershed, and failed to consider the water needs sufficient to sustain beneficial uses, including environmental needs, in the watersheds that are protected by the "area of origin." Water users upstream from the Delta are understandably concerned that their long-standing water rights will be hijacked to subsidize increased inflow in the Delta in order to maintain maximum water exports to junior water rights users that are served by the state and federal project pumps in the Delta. Such a result would directly conflict with the Delta Reform Act, which admonishes against interference with area of origin laws and the system of water rights seniority. The looming BDCP process, and the umbrella authority for BDCP built into the Delta plan, needs to be disclosed and analyzed within the DPEIR, with alternatives compared and watershed needs mitigated. The omission of these important discussions in the present draft of the DPEIR will result in a skewed and incomplete understating of potential environmental effects on the Delta, which at a minimum will serve to exacerbate water rights litigation throughout the state.

Deficiencies in the Plan's Water Availability Analysis Renders Meaningful Environmental Conclusions Impossible

A state lead agency is required to prepare an EIR for each discretionary project that *may* have a significant effect on the environment. (Pub. Resources Code, §§ 21080, subd. (d),21100, subd. (a).) "The word 'may' connotes a 'reasonable possibility'" that a project will have a significant environmental impact. (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 309, quoting *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83 n.16.)

The CEQA Guidelines define a "significant effect on the environment" as a "substantial, *or potentially substantial*, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." (Cal. Code Regs., tit. 14, § 15382, emphasis added; see also Pub. Resources Code, § 21068.) A lead agency's determination of the significance of environmental effects is governed by the criteria in CEQA Guidelines sections 15064 and 15065 and Public Resources Code section 21083, subdivision (b). The Sacramento-San Joaquin Delta is a natural resource of statewide, national, and international significance, containing irreplaceable

resources, and it is the policy of the state to recognize, preserve, and protect those resources of the delta for the use and enjoyment of current and future generations. (Public Resources Code Section 29701)

Water Code section 85300, subdivision (a) therefore requires the DSC to "develop, adopt and implement" the Delta Plan. The Delta Plan itself qualifies as "an activity directly undertaken by a public agency." Thus, the Plan must be analyzed to determine whether it "may cause either a direct physical change… or a reasonably foreseeable indirect physical change[,] in the environment" – thereby qualifying as a "project" subject to CEQA. (Pub. Resources Code, § 21065; see also Cal. Code Regs., tit. 14, § 15060, subd.(c).) The Delta Plan must include "quantified or otherwise measurable targets associated with achieving the objectives of the Delta Plan," and describe "the methods by which the Council shall measure progress toward achieving the co-equal goals." (*Id*., § 85308, subds. (b) and (d); see also *id*., § 85211.) The mere fact that the DSC prepared the DPEIR for the Fifth Draft of the Delta Plan demonstrates the DSC's belief that the plan has potential to cause direct or foreseeably indirect physical changes in the Delta environment. However, the present DPEIR fails to include quantifications or measurable targets to achieve the objectives of the authorizing law. On this issue alone, the present draft of the Delta Plan completely fails as a programmatic document under CEQA.

Water Code section 85302, subdivision (a) further requires that the Delta Plan actually to be implemented to achieve the co-equal goals required under Water Code Section 85054. Once implemented, these goals of the Delta Plan clearly will have physical environmental effects. SB 1 requires that the Delta Plan include specific implementation measures and calls for a plan that is "legally enforceable." (Water Code §§ 85001, subd. (c), 85302, subds. (d) and (e).) The only enforceable components of the Plan, according to the DPEIR, are the "policies." A number of critical elements of the Plan have no policies associated with them, as shown below (without limitation). Hence, those components are unenforceable. The Plan must include enforceable strategies and subgoals as required by the Reform Act, and it is within this area that the Plan falls fundamentally short. The Plan contains little more than a description of the status quo, including recommendations for other government agencies to take action to improve the existing situation in the Bay/Delta. These recommendations are made without any real regulatory muscle to support or enforce them. Ultimately, the people of California cannot rely on the Plan's weak "policies" and unenforceable "recommendations" to meaningfully confront the challenges facing the Delta. As explained below, however, the EIR assumes that the project (*i.e.*, the Delta Plan) will succeed in its grand ambitions and neglects to consider the potential, even likely, result that the Plan will fail to deliver the full range of benefits presupposed but not necessarily realizable.

The DSC's failure to conduct a water availability analysis to determine whether water exists now, or in the future, to sustain present south-of-Delta exports or whether water presently exists to accomplish the State Board's recommended flows is fundamental to the DPEIR's flawed decisions on alternatives: the possible range of alternatives, a realistic "no project" alternative, analysis of those alternatives, and the mitigation of impacts caused by competing water needs. Without a water availability analysis, the DPEIR is complete guesswork and provides no information from which the public can understand whether the Delta Plan will meet the mandatory state requirements under the Delta Reform Act.

Deficiencies in the Plan's Water Availability Analysis Renders Meaningful Economic Conclusions Impossible

One of the significant flaws of previous unsuccessful Bay-Delta proceedings was the absence of a comprehensive economic analysis of the benefits of protecting in-Delta beneficial uses against the benefits of diverting and exporting water from the estuary. The DPEIS continues a flawed tradition of approving projects without economic analysis of the Plan, or alternatives. The lack of economic evaluation deprives decision makers and the public of the critical information necessary to reach informed decisions that reflect an appropriate balance of competing demands.

To properly address ecosystem restoration and water supply reliability requires a comprehensive cost/benefit analysis that describes the economic consequences of various projects and their alternatives, including changes in economic impacts and the distributional outcomes for each alternative. A reasonable economic assessment should describe current and baseline conditions for each alternative; measure the economic effects on physical, human, social and natural capital; and apply a "with" vs. "without" approach that can isolate the economic effects (values, impacts, equity) caused by the alternatives from changes unrelated to the alternatives. A proper economic assessment must include:

1. The changes in the values of goods and services available to Californians that result from the market and non-market activities associated with alternatives. These include changes in economic benefits, costs and changes in the quality of life.
2. The economic impacts that occur to jobs and incomes for workers, costs or revenues for private firms, and expenditures or tax revenues for governments, including multipliers.
3. The effects and economic impacts across brackets of households, ethnicities and geographic areas and identification of how groups that enjoy the benefits differ from those who bear the costs.
4. Measurement of the economic effects of policies on ecosystem services that have value to humans using non-market valuation techniques.

Comprehensive economic analyses are routinely employed by state and federal agencies throughout the nation. The historic failure to apply them in evaluating competing beneficial uses in the Bay-Delta is at the core of the current water crisis in California.

In 1983, the U.S. Water Resources Council published, *The Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* (P&G). The *P&G* helps federal agencies, including the Corps of Engineers and Bureau of Reclamation, to plan water-related projects. The 2007 Water Resources Development Act requires that the *P&G* ensure the best available economic principles and analytical techniques. Unfortunately, the *P&G* has not been updated since it was published. Recently, the National Research Council (NRC) of the National Academies reviewed proposed changes to the *P&G*.[3]

[3] National Research Council of the National Academies. 2010. *A Review of the Proposed Revisions to the Federal Principles and Guidelines Water Resources Planning Document*. Committee on Improving Principles and Guidelines for Federal Water Resources Project Planning, Water Science and Technology Board, Division on Earth and Life Studies.

While the NRC ultimately concluded that the proposed changes did not adequately address the many deficiencies in the outdated *P&G*, and thus were not representative of current best economic practices, the NRC review contains valuable insight into current best practices for economic principles and analytical techniques. As a result of the review, the California Department of Water Resources (DWR) developed the *Economic Analysis Guidebook (Guidebook)* in 2008 to address deficiencies in the *P&G*, in order to help DWR economists conduct economic analyses using up-to-date methods and describe economic concepts and analyses to non-economist staff.[4] The *Guidebook* describes economics as "critical" to describing the environmental consequences, social effects, and costs and benefits of water-management alternatives. This is significant because for every environmental issue, a tradeoff inherently exists between "natural" and "human" demands on water resources. Because of this tradeoff, the examination of environmental issues should always take into account the economic effects of water uses that benefit the natural environment, even if this use adversely impacts agricultural and urban water users. Economics can also help describe effects on social equity or environmental justice, because economic costs and benefits include both monetary and non-monetary effects.[5]

In 2005, DWR produced a four-part study that describes the importance of considering the full range of economic costs and benefits of public policies that affect aquatic resources. DWR refers to this as a "multi-object approach" to floodplain management because it takes into account objectives besides flood mitigation (a single objective) to consider consequences on habitats, water quality, society, etc. This multi-objective approach includes:

1. A report titled *Ecosystem Valuation Methods* (*Methods*), describing a number of up-do-date methods of valuing aquatic-based ecosystem services. The analytical methods discussed have relevance to, and can help inform, assessments of the economic significance of ecological uses of Bay-Delta flows.[6]
2. A second report, *Natural Floodplain Functions and Societal Values* (*Functions*), describing biophysical aspects of floodplain habitats and examples of economic values of the ecosystem services that floodplains provide.[7]
3. A third report, *Middle Creek Flood Ecosystem Restoration Project Case Study: Benefit and Cost Analysis* (*Case Study*), describes the results of a case study of applying analytical methods and data described in the *Methods* and *Functions* reports to a floodplain restoration project.[8]

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[4] California Department of Water Resources (CDWR). 2008. *Economic Analysis Guidebook*. The State of California. January.

[5] CDWR (2008), p.viii.

[6] California Department of Water. 2005A. *Ecosystem Valuation Methods. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

[7] California Department of Water Resources. 2005B. *Natural Floodplain Functions and Societal Values Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

[8] California Department of Water Resources. 2005C. *Middle Creek Flood Ecosystem Restoration Project Case Study: Benefit and Cost Analysis*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. May.

4. A fourth report, *Floodplain Management Benefit and Cost Analysis Framework* (*Framework*), describes a framework for analyses of ecological, social and economic consequences of policy decisions that affect aquatic resources. It emphasizes the importance of including information on ecological consequences in decision-making. It stresses the importance of incorporating environmental and social consequences into management decisions, measuring the economic effects of policies on ecosystem services having value to humans using non-market valuation techniques, selecting appropriate discount rates for economic effects that will occur in the future, accounting for analytical uncertainty and risk and considering ecological, social, and economic effects of policy decision on a broad watershed scale.[9]

The U.S. Environmental Protection Agency (EPA) recently released two guidelines for preparing economic analyses and valuing ecological services. The first, entitled *Valuing the Protection of Ecological Systems and Services,* was released by the EPA's Science Advisory Board (SAB) in May of 2009.[10] The report describes methods of identifying and describing the economic significance of natural resources and associated ecosystem services affected by policies or projects. The SAB noted the importance of valuing ecosystem services using up-to-date economic methods, while promoting collaboration among social scientists and biophysical scientists. Many of the recommendations have relevance to assessing the economic effects of water allocations in the Delta. These include:

1. Identifying and describing the critical relationships between biophysical aspects of natural resources and ecosystem services, and analyses of the economic effects of policies that impacts resources and services.
2. Choosing appropriate valuation methods.
3. Identifying and describing sources of uncertainty in analyses of the economic significance of ecosystem services. [11]

The most widely used tool for evaluating alternative approaches and balancing public trust uses with other beneficial uses is the Benefit Cost Analysis (BCA). BCA requires the identification and clarification of the elements of each alternative.[12] Care must be taken to avoid errors of omission, as these errors would affect the outcome of the analysis. The scope of analysis (i.e., which benefits and costs matter, to whom, over what geography and over what period of time), along with what should be included in the analysis and who and what should be excluded must be identified.[13] Risk and uncertainty must be identified and accounted for. For

[9] California Department of Water Resources. 2005D. *Floodplain Management Benefits and Cost Analysis Framework. Revised Draft*. Multi-Objective Approaches to Floodplain Management on a Watershed Basis. June.

[10] Environmental Protection Agency (EPA) Science Advisory Board. 2009. Valuing the Protection of Ecological Systems and Services. EPA-SAB-09-012. May.

[11] EPA, 2009, p.1-7.

[12] Field, B.C. 1997. *Environmental Economics*, 2nd Edition. San Francisco: McGraw-Hill Company, Inc. p.116-117; U.S. Environmental Protection Agency (EPA). 2010. *Guidelines for Preparing Economic Analyses.* Report No. EPA-240-R-10-001. December. p.A-8.

[13] U.S. Environmental Protection Agency (EPA). 1993. *Guide for Cost-Effectiveness and Cost-Benefit Analysis of State and Local Ground Water Protection Programs*. U.S. Environmental Protection Agency, Office of Water, and

example, the analysis should not assume that all Californians would perceive numerically equal upside and downside risks in a neutral way because, when it comes to environmental matters, people tend to be risk averse. [14] Non-quantified factors must therefore be assessed and explained.[15] If important benefits and costs cannot be expressed in monetary units, BCA can be misleading because the calculation of net benefits does not demonstrate a full evaluation of benefits and costs.

Best practices for BCA would therefore include, but are not be limited to:

1. Comparing conditions with the alternative to conditions without the alternative: a good BCA avoids comparing conditions before the alternative to conditions after the alternative.[16]
2. Reporting and documenting methods, information and assumptions. A good BCA should rely on transparent assumptions and allow for straightforward replication by a third-party analyst.[17]
3. Applying methods and assumptions consistently throughout the analysis.[18] For example, uncertainty should not be accounted for in one aspect of the BCA and ignored in another.
4. Recognizing that economic impacts and economic equity are complements to BCA and not substitutes for it. Consider EPA's guidance, "[c]ounting the number of jobs lost (or gained) as a result of a regulation generally has no meaning in the context of benefit-cost analysis."[19] Each of the categories of economic effects (i.e., economic values, economic impacts and economic equity) plays a distinct role in a comprehensive economic description and evaluation of alternatives for improving Bay-Delta flows and should remain distinct.
5. Addressing externalities explicitly; i.e., accounting for the effects of a transaction on those who did not agree to experience the costs or benefits. The expected undesirable side-effects and ancillary benefits of a proposed action or alternative should be added to the direct benefits and costs as appropriate.[20]

Office of Ground Water and Drinking Water. April. p.11.

[14] Lesser, J.A., D.E. Dodds, and R.O. Zerbe, Jr.. 1997. *Environmental Economics and Policy*. p.406. Goodstein, 1999. E.S. *Economics and the Environment*. p.150. Field, B.C. 1994. *Environmental Economics*. p.129.

[15] Office of Management and Budget (OMB). 2003. *Informing Regulatory Decisions: 2003 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. Office of Information and Regulatory Affairs. February. p. 127.

[16] Office of Management and Budget (OMB). 1992. *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. Circular A-94. October. p.6.

[17] OMB, *Informing Regulatory Decisions*, 2003, p.134.

[18] Rossi, P. and H. Freeman. 1982. *Economics*, 13th Edition. New York: McGraw-Hill Book Company. p.275.

[19] EPA, 2010, p.8-8. See also, OMB, 1994, p.6-7.

[20] OMB, *Regulatory Analysis*, 2003, p.3.

Evaluation of economics and alternatives must not become trapped in a simplified in-stream or habitat use vs. an agricultural or municipal use (jobs vs. fish) argument. As the Public Policy Institute of California (PPIC) describe in their recent report, *Myths of California Water – Implications and Reality,* the competition for Bay-Delta water resources is much more complex:

> Healthy ecosystems provide significant value to California's economy, partially and sometimes fully offsetting their costs to traditional economic sectors. Direct benefits include improvements in recreation, commercial fishing, and drinking and agricultural water quality, and indirect benefits include improvement in the quality of life in California. [21]

In its December, 2010 publication entitled *Guidelines for Preparing Economic Analyses (Guidelines)* the EPA updated best practices for the third time since the guideline's initial publication in 1983. [22] This most recent update includes detailed recommendations on identifying and describing baseline conditions that would exist with and without a proposed policy revision or regulation, along with an expanded description of the methods used to define and quantify the ecological benefits of projects and policies that protect natural resources.

In analyzing conditions in the Bay-Delta at present, it is clear that insufficient resources exist to satisfy all the demands on Bay-Delta water resources for goods and services. When water is used to produce one set of goods and services, demands for other must go unmet. Understanding this demand competition and balancing opposing needs is an essential task of the DSC. These demands include:

1. Competition for agricultural, municipal, industrial and hydroelectric supply that are economically important to public and private enterprises and households. There is potential for these demands to adversely impact other commercial uses like commercial and guided sport fishing.
2. Quality-of-life demands like aesthetic and recreational values that can increase economic well-being by enabling individuals to live in a place that offers recreational opportunities, pleasant scenery, wildlife viewing and other amenities considered important. These quality-of-life issues can raise property values and demand for commercial products.[23] In fact, differences in quality of life explain about half the interstate variation in job growth during periods of economic growth.[24]
3. Environmental demands associated with economic values that do not necessarily entail a conscious, explicit use of ecosystem goods and services. Environmental

[21] Hanak, Ellen et al. 2010 (PPIC 2010). "Myths of California Water—Implications and Reality." *West- Northwest*, Vol. 16, No. 1, Winter. p 20-22.

[22] National Center for Environmental Economics. 2010. *Guidelines for Preparing Economic Analyses. U.S. Environmental Protection Agency*. EPA 240-R-10-001. December.

[23] Roback, J. 1982. "Wages, Rents, and the Quality of Life." *Journal of Political Economy* 90: 1257-1278; 1988. "Wages, Rents, and Amenities: Differences among Workers and Regions." *Economic Inquiry* 26: 23-41.

[24] Partridge, M. and D. Rickman. 2003. "The Waxing and Waning of Regional Economies: The Chicken-Egg Question of Jobs Versus People." *Journal of Urban Economics* 53: 76-97.

values increase as people learn more about the environment, the services it provides, and environmental degradation.[25] These include:

a. Non-use values and values of goods and services that generally go unrecognized. Non-use values arise whenever people place a value on maintaining some aspect of the environment, even though they do not use it. For example, studies have shown that regardless of direct interaction with salmon populations, many Californians hold a positive willingness to pay to ensure the long-term survival of salmon.[26]
b. Ecosystem services that provided benefits that people generally consume without being aware of them. Some of these maintain the web of life. Others, such as the ability of wetlands to purify water and mitigate flood damage or water that dilutes wastes and maintains water quality have a more direct link to the well-being of California residents. Scientists and economists believe these services have great economic value, even though people are generally unaware of their importance.[27]

While quality of life and environmental values are typically harder to measure than commercial values, this does not diminish their value or impact on jobs and incomes. Rather, the difficulty in measuring environmental values merely reflects the lack of tools for measuring them. One of the challenges the DSC faces is identifying, describing, evaluating and balancing the full range of benefits and costs of the competing demands for Bay-Delta water resources. It is in this area where the lack of a quality water availability analysis renders a BAC infeasible.

The DSC's Failure to Analyze Changing Hydrology Invalidates its Analysis of Effects on the Bay-Delta

The DPEIR fails to use the latest information on changing hydrology in the Delta watershed, thereby invalidating its "no project" assessment. The California Legislature recognized in 2006 legislation (AB 32) that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California," including a "reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems." (Health & Saf. Code, § 38501(a).) The Legislature went on to list multiple uses of water it expects to be reduced or threatened by global warming, including the quality and supply of water from Sierra snowpack, hydropower generation, the protection of recreational uses, fisheries, marine life, and public health. Health & Saf. Code, § 38501(b). The "harms associated with climate change are serious and well recognized," (*Massachusetts v. Environmental Protection Agency* (2007) 127 S. Ct. 1438, 1455) and yet climate change goes virtually unmentioned in the PDEIR's discussion of the program, its potential facilities, and the existing environmental setting. The no-project

[25] Blomquist, G.C. and D.R. Johnson. 1998. "Resource Quality Information and Validity of Willingness to Pay in Contingent Valuation." *Resource and Energy Economics* 20:179-196.

[26] Loomis, J., T. Brown, and J. Bergstrom. 2007. "Defining, Valuing, and Providing Ecosystem Goods and Services," *Natural Resources Journal* 47: 329-376.

[27] Daily, G.C. (ed). 1997. *Nature's Services: Societal Dependence on Natural Ecosystems.* Washington, D.C.: Island Press.

assessment never calculates the foreseeable consequences of climate change on program operations. These effects must be properly recognized and analyzed by the DPEIR.

Failure to analyze the foreseeable consequences of climate change violates the requirements of CEQA. In *Communities for a Better Environment v. City of Richmond* [*City of Richmond*] (2010) 184 Cal.App.4th 70, 85), the court set aside the EIR for a refinery project partly because it lacked "any objective quantification" of factors to the project that directly impacted GHG emissions, which the court found made some of the conclusions "meaningless." The "difficulties caused by evolving technologies and scientific protocols do not justify a lead agency's failure to meet its responsibilities under CEQA by not even attempting to formulate a legally adequate mitigation plan." (*Id*. at p. 96.)

The CEQA deficiency in the present matter is even clearer than the deficiencies found by the court in *City of Richmond.* The deficiencies in the DPEIR do not simply involve the project's GHG contribution, but rather a question of whether foreseeable changes in climate must be studied to determine effects on the program's ability to provide water to multiple uses during its proposed one hundred year term. While not expected to foresee the unforeseeable, an agency must use its "best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144; see also *City of Richmond*, 184 Cal.App.4th at p. 96; *Vineyard*, 40 Cal.4th at p. 428.) As in *Vineyard*, failure to provide the analysis omitted from the DPEIR would leave uncertain the program's long-term ability to furnish water to its referenced uses. (*Id.)* In this instance, the agency must first conduct a "thorough investigation" of climate change and support its proposed hydrology "by scientific or objective data." (*Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* [*Berkeley Keep Jets*] (2001) 91 Cal.App.4th 1344, 1370-71 (rejecting non-analysis of air quality problem even where no universally-accepted protocol yet existed).) The DSC DPEIR should include climate data available to its sister agencies, such as DWR's *California Water Plan Update, 2005*. This report finds that "evaluating impacts of global climate change on the management of the SWP can be done with existing resources" and that "state government must help predict and prepare for the effects of global climate change on our water resources and water management systems." (Maurice Roos, *Accounting for Climate Change*, in DWR, *Water Plan 2005*, appendix 4.) This DWR report surveys the "large number of potential effects on California water resources infrastructure due to global warming." (*Id.* at p. 4-616.) While the EIR notes its reference to some uncertainty, that uncertainty is "primarily on the degree of change to be expected," and that the report found that "[r]esponsible planning requires that the California planning community work with climate scientists and others to reduce these uncertainties and to begin to prepare for those impacts that are well understood, already appearing as trends, or likely to appear." (Roos, *op cit.*, at 4-612.)

Clearly, data exists regarding the potential impacts of global climate change on the Bay-Delta. The 2005 Roos report helps illuminate just how climate change is likely to affect DSC program facilities operation. It refers to "new and updated temperature modeling" being developed for Oroville relicensing, and states that "a logical extension would be to apply the new temperature models to evaluate the affect [*sic*] of a changed climate and runoff scenario, *beginning with Lake Oroville and the Feather River*." (*Id.* at p. 4-616 (emphasis added).) Roos also finds that "[i]t is time to try to *quantify the effects of projected climate change on California's water resources*." (*Id.* at p. 4-625 (emphasis added).[28]

[28] *See also Progress on Incorporating Climate Change into Management of California's Water Resources* (*Progress 2006*,) for examples of "incorporating climate change into existing water resources planning management

In *Progress on Incorporating Climate Change into Management of California's Water Resources (Progress 2006)*, the authors describe how the loss of the State's snowpack will affect the operation of most major multipurpose reservoirs at low and mid-elevations in the Sierra. *Progress 2006*, at 2-31; *see also id.* at 6-31 to 6-33 (discussing changing flood risks in the Feather River Basin). The report warns that climate change will increase water temperatures, which in turn will "pose a threat to aquatic species that are sensitive to temperature, including anadromous fish. Increased water temperatures will also cause decreased dissolved oxygen concentrations in water and other water quality changes, and will likely increase production of algae and some aquatic weeds." *Id.* at 2-60. For example, the expected consequences of the first impact, "reduction of the State's average annual snowpack," are "[p]otential loss of *5 million acre-feet or more* of annual average water storage in the State's snowpack," and "*increased challenges for reservoir management* and balancing the competing concerns of flood protection and water supply." *Id.* (emphasis added).

The failure of the DPEIR to disclose and analyze potential climate change effects on the hydrology upon which the Delta Plan relies is stunningly incompetent. This omission makes it impossible for the public and the decision-makers to evaluate the alternatives, the mitigations, and the true nature of the environmental impacts of the proposed DSC program, all of which are violations of CEQA's fair disclosure requirements. This shortcoming manifests itself throughout the portions of the document that describe the Plan's "policies" and "recommendations." Of these two categories, only "policies" create binding obligations; "recommendations" merely suggest ideas to other actors for their contemplation. (Delta Plan at pp. 53-54.) Hence, the likelihood of the Plan's success as a "legally enforceable" document for the "comprehensive, long-term management [of] the Delta" (Wat. Code §§ 85000(c), 85059) must be judged by analyzing its policies alone since there is no certainty whatsoever that any of the "recommendations" will be heeded.

Within the Plan's twelve policies, there is scant substance that advances the Legislature's goals beyond preexisting laws and strategies. Most of the policies repeat existing requirements, demand the drafting of studies or plans that will inform further actions, or allow for unfettered wiggle room by setting standards based not on numeric targets, but solely on "feasibility" or "appropriateness." This lack of substance is far from sufficient to ensure the provision of a more reliable water supply for California and the protection, restoration, and enhancement of the Delta. In adopting such policies, the Plan also ignores the Legislature's direction that the Plan should "[i]nclude quantified or otherwise measurable targets associated with achieving the [Plan's] objectives" and "[b]e based on the best available scientific information." (Wat. Code § 85308.)

CEQA Standards Are Not Met in The DPEIR

As discussed above, a state lead agency is required to prepare an EIR for each discretionary project that *may* have a significant effect on the environment. (Pub. Resources Code, §§ 21080, subd. (d),21100, subd. (a).) The CEQA Guidelines describe a number of advantages to preparation of a program EIR, such as: (1) providing "for a more exhaustive

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tools and methodologies." (In this respect, compare *PCL v. DWR*, 89 Cal.App.4th at p. 919 (EIR violated CEQA's information disclosure requirements by refusing to forecast based on simulation models DWR used elsewhere).

consideration of effects and alternatives than would be practical in an EIR on an individual action;" (2) ensuring full consideration of cumulative impacts; (3) avoiding "duplicative reconsideration of basic policy considerations;" and (4) allowing for consideration of "broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts." (*Id*., § 15168, subd. (b).) Therefore, prior to an approval of the Delta Plan, the DSC must ensure that the significant environmental effects of the plan are avoided or mitigated to a level of insignificance whenever feasible. (Pub. Resources Code, §§ 21002, 21002.1, subd. (b).) CEQA provides that the DSC should not approve the Delta Plan "if there are feasible alternatives or feasible mitigation measures which would substantially lessen the significant environmental effects of" the plan. (*Id.*, § 21002; see also Cal. Code Regs., tit. 14, §§ 15021, subd. (a)(2), 15092, subd. (b)(2)(A).)

Prior to approving the Delta Plan, the DSC must consider the final EIR and make one or more of the following three findings with respect to *each* significant effect identified in the EIR:

1. Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;
2. Changes or alterations that are within another agency's responsibility or jurisdiction have been, or can and should be, adopted by that other agency; or 3) Specific economic, legal, social, technological or other considerations make infeasible the mitigation measures or alternatives identified in the EIR and specific overriding economic, legal, social or technological benefits of the project outweigh its significant environmental effects. (Pub. Resources Code, § 21081, subds. (a)(1)-(3) and (b); Cal. Code Regs., tit. 14, §§ 15004. subd. (a), 15043, 15091, subd. (a), 15093, subd. (a).) These findings must be supported by substantial evidence in the record. (Pub. Resources Code, § 21081.5; Cal. Code Regs., tit. 14, §15091, subd. (b), 15093, subd. (b).) Finally, if the Council has required implementation of mitigation measures in its findings, it also must adopt a mitigation reporting or monitoring program pursuant to Public Resources Code section 21081.6 and Guidelines section 15097. (See Cal. Code Regs., tit. 14, § 15091, subd. (d).)

None of these requirements are met in the DPEIR.

Ambiguities and Lack of Crucial Data in the DPEIR Prevent An Objective Assessment of Whether the Project and its Alternatives Can Accomplish the Asserted Objectives

A. The EIR Fails to Meet the Purposes of a Program EIR.

Using a program EIR affords a lead agency no cover for a CEQA document that "does not provide decision-makers, and the public, with the information about the project required by CEQA." (*Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 916.) A program EIR cannot rationalize vague or evasive analysis. The CEQA guidelines' list of "advantages" to preparing a program EIR include a "more exhaustive" examination of effects and alternatives, "full consideration" of cumulative impacts, and allowance for analysis of "broad policy alternatives and program wide mitigation measures" at a time when the lead agency has the best opportunity to address them properly. (Cal. Code Regs., tit. 14, § 15168(b).)

The DPEIR utterly fails to meet these standards. The groups incorporate by this reference the comments filed by the firm of Rossmann & Moore on this point. As they point out, the DSC cannot assert that the Delta Plan does not "analyze the operation of present or foreseeable future operations of the export projects in the Delta so how can the DSC determine "consistency" with the proposed Delta Plan.

B. The EIR Evades a Genuine Comparison Between the Project and Alternatives

"[An] EIR may not define a purpose for a project and then remove from consideration those matters necessary to the assessment whether the purpose can be achieved." (*County of Inyo v. City of Los Angeles* (1981) 124 Cal.App.3d 1, 9.) But that is precisely what occurs in the Draft EIR.

The Draft EIR identifies the Delta Plan as a "legally enforceable, comprehensive management plan for the Sacramento–San Joaquin Delta and the Suisun Marsh (Delta) that *achieves the coequal goals and all of the inherent subgoals and objectives, as described in Section 1*." (DPEIR at p. 2A-1.) The Plan and EIR are the source of information for "cities, counties, and State, federal, and local agencies to restore the Delta ecosystem and provide a more reliable water supply for California." (*Id.*) However, the DPEIR fails entirely to serve as the basis for a genuine comparison between the project and its alternatives, making the reader unable to determine even whether the plan, much less its alternatives, can feasibly accomplish these objectives.

First, the EIR's definition of the "project" itself is fraught with ambiguities. For example, it leaves uncertain whether, and under what circumstances, the "applicant-driven" BDCP will become part of the Plan and therefore be incorporated into consistency determinations. Additionally, key words that are essential to understanding the contours of the project remain undefined, most notably the "reliability" of water supplies.

Second, through a combination of euphemisms and evasive statements, the DPEIR avoids confronting critical water supply difficulties that are likely to undermine the DPEIR's assumption that the "coequal goals" can be simultaneously achieved. The lengthy analysis of water supply, for instance, barely addresses the State Board's Delta flow recommendations. These recommendations underscore the imperative to reduce water exports to sustain the Delta's ecosystem, as well as beneficial uses and public trust values. The State Board recommended flow criteria to protect these values in August 2010: "Recent Delta flows are insufficient to support native Delta fishes for today's habitats…." In order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Board are crafted as percentages of natural or unimpaired flows. These criteria include:

- 75% of unimpaired Delta outflow from January through June;
- 75% of unimpaired Sacramento River inflow from November through June; and
- 60% of unimpaired San Joaquin River inflow from February through June."[29]

Moreover, testimony from environmentalists and water suppliers in the flow proceedings reveal a depth of conflict barely addressed in the DPEIR, and the still-unresolved history of

[29] Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, State Water Resources Control Board, Aug. 3, 2010, p. 5, *available at* http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow.

controversy over the Monterey Amendments and the Kern Water Bank is not even discussed in the DPEIR's water analysis.

Third, as persuasively detailed in the comment letters of the California Environmental Water Caucus and this document, the DPEIR undermines any fair comparison between the project and Alternative 2. It does so by (1) misattributing key project elements to Alternative 2; (2) assigning to the proposed project an illusory advantage based upon retirement of drainage-impaired land; and (3) failing to ascribe to Alternative 2 significant environmental advantages likely to stem from the retirement of that land.

Finally, having recognized that global climate change is likely to have an enormous impact on future water supply (including a 4.5 to 6 million acre-foot reduction in snowpack), the EIR inconsistently applies that insight. Incredibly, the EIR cites climate change in its discussion of the disadvantages of Alternative 2 (due to its additional "facilities") but fails to apply climate change concerns to the Delta Plan's core issue: whether sufficient water supply will exist to serve the "reliability" component without severely compromising the Plan's ability to protect the "paramount concern" of enabling "permanent protection" of the Delta's resources. (Wat. Code § 85022(c)(2).) This failure also makes it impossible for the DPEIR to evaluate alternatives, potential mitigations, or to provide the disclosure necessary to allow the public and the DSC decision-makers to evaluate the effectiveness of the proposed Delta Plan.

Environmental Setting as Established in the Delta Reform Act

The 2009 legislation described the current environmental setting in the Delta as follows:

> The Delta is a critically important natural resource for California and the nation. It serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of North and South America. (Water Code Section 85002)
>
> The Delta is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced estuary and wetland ecosystem of hemispheric importance. (Water Code Section 85022(c) (1))…
>
> (a) The Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources.
>
> (b) In response to the Delta crisis, the Legislature and the Governor required development of a new long-term strategic vision for managing the Delta. The Governor appointed a Blue Ribbon Task Force to recommend a new "Delta Vision Strategic Plan" to his cabinet committee, which, in turn, made recommendations for a Delta Vision to the Governor and the Legislature on January 3, 2009.

(c) By enacting this division, it is the intent of the Legislature to provide for the
sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that will direct efforts across state agencies to develop a legally enforceable Delta Plan.

85001.

For the reasons stated below, the DSC plan has not adequately disclosed existing data in the possession of the DSC and other state and federal agencies, nor has the DPEIR addressed the policies that the Legislature enacted in the Delta Reform Act to govern the DSC plan.

Legal Standards of the Delta Reform Act

A. The 12 policies, along with the 61 recommendations that make up the Delta Plan, utterly fail to comply with the Delta Reform Act.

Rather than repeat comments on this subject that you will receive from others, the groups incorporate by this reference the discussion contained in the comment letter by the office of Rossmann & Moore, Section 1, pointing out the inadequacy of the 12 Policies in the Plan and DPEIR in meeting the standards, listed below, that were established by the Legislature for the DSC to actually use in developing its mandatory Delta Plan. Water Code § 85302 states that "[t]he Delta Plan shall include measures that promote all of the following characteristics of a healthy Delta ecosystem":

(1) Viable populations of native resident and migratory species.
(2) Functional corridors for migratory species.
(3) Diverse and biologically appropriate habitats and ecosystem processes.
(4) Reduced threats and stresses on the Delta ecosystem.
(5) Conditions conducive to meeting or exceeding the goals in existing species recovery plans and state and federal goals with respect to doubling salmon populations.

(d) The Delta Plan shall include measures to promote a more reliable water supply that address all of the following:
(1) Meeting the needs for reasonable and beneficial uses of water.
(2) Sustaining the economic vitality of the state.
(3) Improving water quality to protect human health and the environment.

(e) The following subgoals and strategies for restoring a healthy ecosystem shall be included in the Delta Plan:
(1) Restore large areas of interconnected habitats within the Delta and its watershed by 2100.
(2) Establish migratory corridors for fish, birds, and other animals along selected Delta river channels.
(3) Promote self-sustaining, diverse populations of native and valued species by reducing the risk of take and harm from invasive species.
(4) Restore Delta flows and channels to support a healthy estuary and other ecosystems.

(5) Improve water quality to meet drinking water, agriculture, and ecosystem long-term goals.
(6) Restore habitat necessary to avoid a net loss of migratory bird habitat and, where feasible, increase migratory bird habitat to promote viable populations of migratory birds.

Water Code § 85302 (c) – (e)

Unless the Plan's unenforceable recommendations are converted into enforceable policies, the Plan will fail to uphold its statutory purpose. In its current state, the Plan will likely fail, and yet this the DPEIR does not factor this failure into its analysis. For example, forty plus years after the enactment of the federal Clean Water Act and Porter Cologne, virtually every significant water body in the Central Valley, including the entire Delta, is identified as "impaired" and incapable of supporting identified beneficial uses because of multiple pollutants. With the exception of several legacy pollutants, these impairments exist because the chronically understaffed agencies charged with implementing water quality statutes have been unwilling or unable to carry out their mandated responsibilities. Despite the serious and broadly recognized impacts that deteriorating water quality poses to the viability of the Bay-Delta, the plan and the DPEIR call for no new, meaningful actions to address this threat. Rather, the plan and the DPEIR simply reiterate existing efforts and already-planned initiatives that, to succeed, would require understaffed agencies to accomplish measures they have been unable or unwilling to do over the last 30 years. In analyzing the Plan, the DPEIR simply acknowledges the impairment problem and then blithely ignores it.

The DPEIR is similarly superficial in its discussion on water supply reliability. The Proposed Project does not require specific water reliability projects - rather it contains broad requirements and recommendations. Given both the general nature of the Proposed Project policies and recommendations and the uncertainty concerning the extent to which the Proposed Project will result in any particular action, it is unclear what types of projects will actually be implemented as a result of the Proposed Project policies and recommendations. Yet despite this uncertainty, this DPEIR asserts that the Proposed Project will lead to an increase in local and regional water reliability projects. (DPEIR at p. 2A-6.) The logic of this assertion is untenable, because DSC has no authority over many of the projects that would lead to increased storage facilities, and therefore cannot contend that Proposed Project recommendations regarding storage will lead to an increase in water storage projects. These are just two examples of the utter legal failure of the Draft Plan and the DPEIR to disclose, analyze, and mitigate the existing problems in past governance, enforcement, and management by state and federal agencies that lead to the passage of the Delta Reform Act. We list and comment upon many more such failures in this letter in the Specific Comments Section, below.

B. <u>The Ecological Crisis In The Delta Is Not Adequately Analyzed In The DPEIR</u>

The text of Water Code section 85001 holds that:

a) The Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources.
b) In response to the Delta crisis, the Legislature and the Governor required development of a new long-term strategic vision for managing the Delta. The Governor appointed a Blue

Ribbon Task Force to recommend a new "Delta Vision Strategic Plan" to his cabinet committee, which, in turn, made recommendations for a Delta Vision to the Governor and the Legislature on January 3, 2009.

c) By enacting this division, it is the intent of the Legislature to provide for the sustainable management of the Sacramento-San Joaquin Delta ecosystem, to provide for a more reliable water supply for the state, to protect and enhance the quality of water supply from the Delta, and to establish a governance structure that will direct efforts across state agencies to develop a legally enforceable Delta Plan.

The objectives of the Delta Plan are defined by the coequal goals, and policy objectives presented in Water Code sections 85054, 85020, 85021, 85022(c), and 85023. “Coequal goals” means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place. (Water Code section 85054.) The policy of the State of California is to achieve the following objectives that the Legislature declares are inherent in the coequal goals for management of the Delta:

a) Manage the Delta's water and environmental resources and the water resources of the state over the long term.
b) Protect and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place.
c) Restore the Delta ecosystem, including its fisheries and wildlife, as the heart of a healthy estuary and wetland ecosystem.
d) Promote statewide water conservation, water use efficiency, and sustainable water use.
e) Improve water quality to protect human health and the environment consistent with achieving water quality objectives in the Delta.
f) Improve the water conveyance system and expand statewide water storage.
g) Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and investments in flood protection.
h) Establish a new governance structure with the authority, responsibility, accountability, scientific support, and adequate and secure funding to achieve these objectives.

Water Code section 85020.

Populations of Sacramento River and Delta native pelagic and salmonid fisheries and their associated food webs are collapsing. This is not surprising when the estuary has systematically been deprived of half of its water flow, its critical habitat has been reduced, variability has been eliminated, and the hydrograph turned on its head. The destruction of native pelagic and salmonid fisheries in the Delta are especially vulnerable to such dramatic degradation due to their slow pace of evolution over several millennia.

The historical collapse of fisheries in the Central Valley is amply documented. In 1978, following a long formal evidentiary hearing and in a moment of remarkable candor, the State Water Board found that “full mitigation of project impacts on all fishery species now would

require the virtual shutting down of the project export pumps."[30] In 1988, following another extensive evidentiary hearing, the State Water Board acknowledged, "a safe level of exports is not known."[31] Indeed, the Board's 1988 draft order found that "optimal water quality objectives" for shad and striped bass larvae and salmon smolt survival in the Delta would require the prohibition of all exports between April 1 through November 30, in all types of water years.[32] By 1991:

1. Adult fall-run Sacramento River salmon escapement had been halved from its numbers in the late 1960s
2. Spring-run Sacramento river salmon abundance was about 0.5% of historic runs
3. The San Joaquin River fall-run salmon escapement dropped from 70,000 in 1985 to 430 in 1991
4. The 1985 level of Delta smelt abundance was 80% lower than the 1967-1982 average population
5. Adult striped bass declined from about 3 million (early 1960s) to 1.7 million (late 1960s) to approximately 590,000 (1990)
6. Abundances of shrimp and rotifers declined between 67% and 90% in the 1970s and 1980s
7. White catfish populations severely declined since the mid-1970s and overall fish abundance in Suisun Marsh has been reduced by 90% since 1980.[33]

Fisheries collapse over the last decade has accelerated. The Department of Fish and Game's (DFG) Fall Midwater Trawl indices for 2009 reveal that young striped bass, Delta smelt, splittail and threadfin shad are at record historical lows and that longfin smelt and American shad are at the second and third lowest level of record, respectively.[34] Salmonids have fared as poorly as pelagic species. Sacramento River fall-run Chinook salmon, numbering some 750,000 in 2002, dropped to 90,000 in 2007 to 66,264 in 2008 and to a dismal new low of 39,530 in 2009. In response, the Pacific Fisheries Management Council and the Fish and Game Commission closed the ocean and coastal fishery to commercial and recreational fishing for the 2008 fishing season and the Commission banned salmon fishing in all Central Valley Rivers, with the exception of limited fishing on a stretch of the Sacramento River. The ban on all salmon fishing was extended through the 2009 season but eased somewhat for 2010.[35]

While the causes of fishery declines are numerous, including contaminants and invasive species, the major factors in their decline are the significant reductions in Delta inflow and outflow. These reductions have caused extensive changes in the historic hydrograph of the Delta, resulting in loss and degradation of habitat that is so significant that the habitat is on the point of collapse. Central Valley Project and State Water Project pumps seasonally export up to 65% of inflow. In 10 of the last 20 years, more than 50% of total freshwater inflow has been diverted from tributary rivers or from the Delta. Sacramento Basin inflow has been reduced and the Delta's annual freshwater outflow has been reduced, especially in the critical fall and spring periods. Both exports and reverse Old and Middle River flows have increased over the last

[30] SWRCB. 1978. D-1485. Page 13.
[31] SWRCB. 1988. Draft 1988 Water Quality Control Plan for Salinity, 7.3.2.5. Pages 7-32.
[32] Ibid. Table 5-4-1. Page 5-110.
[33] SWRCB. 1992. Draft Water Right Decision 1630. Page 29.
[34] DFG. 2010. Fall Midwater Trawl. 3 pages.
[35] SWRCB. 2010. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. 3 August 2010. Page 39.

decade.[36]

The California Legislature, in the Delta Reform Act, (as specified above) tasked the SWRCB to gather the best available science and develop flow criteria for the Delta ecosystem necessary to protect public trust resources, including the volume, quality, and timing of water needed under different conditions. The SWRCB conducted a proceeding in the matter. An astonishing assemblage of biologists and scientists from resource and water agencies, academia and the NGO community testified and presented evidence in the hearing. A final report was issued on August 3, 2010. The report observes that "[t]he combined effects of water exports and upstream diversions reduced average annual net outflow from the Delta from unimpaired conditions by 33% and 48% during the 1948 – 1968 and 1986 – 2005 periods, respectively and that Sacramento River inflows over the last 18 to 22 years have been about 50% on average between April through June compared to unimpaired conditions. [37] The report determined that "[r]ecent Delta flows are insufficient to support native Delta fishes for today's habitats." The report's criteria for flows include, among many other measures, "75% of unimpaired Delta outflow from January through June and 75% of unimpaired Sacramento River inflow from November through June."[38] Existing water criteria fails to address many issues that must be considered in considering impacts on aquatic life. For example, during the SWRCB's Delta flow hearing, Dr. G. Fred Lee pointed out that:

> The current US EPA criteria development approach only considers some and in some cases a small part of the impacts of chemical contaminates on aquatic life. For example, the approach currently used to develop water quality criteria does not include additive/synergistic properties of regulated chemicals that occur in concentration below the water quality criteria allowing unanticipated adverse impacts to aquatic life. Adverse impacts of chemicals to aquatic life that occur for especially sensitive species, such as zooplankton which serve as fish food organism were not included in the development of the water quality criteria. These criteria are only applicable to protecting about 90% of the species. Therefore there could readily be fish species in the Delta and its tributaries that are more sensitive to a chemical than those used to establish the water quality criterion value. There is also very limited information on chronic exposure to sub-lethal impacts of a chemical and mixtures of chemicals to fish populations. Another issue is that other stressor such as low DO, ammonia etc. that can impact the lethal and especially sub-lethal impacts of chemicals. It has been well known for over 40 years through biomarker studies that fish and other organisms show organism biochemical responses to chemical exposures at concentrations well below the water quality criterion. The significance of these biomarker responses to an organism or group of organisms is largely unknown. Chemicals can adversely impact the health of the fish and other aquatic life that weaken their ability to resist adverse impact of stressors such as low DO, elevated

[36] Swanson, C. 2010. Presentation to NRC Committee of Sustainable Water and Environmental Management in the California Bay-Delta. 26 January 2010. 18 slides.

[37] SWRCB. 2010. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. 3 August 2010. 3.3.2, page 28.

[38] Ibid. 1.2 Summary Determinations, Flow Criteria and Conclusions, page 5.

> temperature and predation as well to disease. It's been known for over 40 years that very low levels of copper affect the "breathing" rate of some fish.[39]

Dr. Lee went on to point out, "many thousands of unregulated chemicals, including pharmaceuticals and personal care products, industrial chemicals, and other potentially hazardous chemicals, are discharged to waterways, including the Delta and its tributaries, in domestic wastewaters, agricultural runoff and waste waters."[40]

This data, and other volumes of relevant evidence are largely ignored or downplayed by the Delta Plan and the DPEIR. Relevant evidence necessary to determine whether or not the proposed Delta Plan and the alternative examined would arrest this dire situation, and whether mitigations could bring these impacts below a state of significance are not included. This is a CEQA failure of huge magnitude.

The DPEIR Fails to Adequately Address State Policy to Reduce Reliance on the Delta

The policy of the State of California is to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. (Water Code section 85021.) Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts. (Id.) The Legislature finds and declares all of the following:

> (1) The Delta is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced estuary and wetland ecosystem of hemispheric importance.
> (2) The permanent protection of the Delta's natural and scenic resources is the *paramount* concern to present and future residents of the state and nation.
> (3) To promote the public safety, health, and welfare, and to protect public and private property, wildlife, fisheries, and the natural environment, it is necessary to protect and enhance the ecosystem of the Delta and prevent its further deterioration and destruction.
> (4) Existing developed uses, and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to persons living and working in the Delta.

Water Code section 85022 (c) (emphasis added).

The groups hereby incorporate, in so far as they are consistent with the views expressed in this document, the comments of the South Delta Water Agency prepared by John Herrick for this DPEIR process. As Mr. Herrick says: "What is needed is for the DPEIR to determine whether the DSC Plan has satisfied these laws is a detailed analysis of what water is produced in the relevant watersheds, what is necessary for environmental needs as described in the State

[39] Ibid. Page 4.
[40] Ibid. Page 4.

Board's Flow Recommendations, what is needed by superior right holders and what is left over for export." As does the BDCP, the Delta Plan ignores the necessary first step of preparing a water availability analysis and so ends up simply encouraging others to find new supply projects without addressing the real problem. Such encouragement does not move us closer to a reliable water supply for present Delta users, it simply tells those who do not have enough water that they do not have enough water. Water users south of the Delta all know their supply is dependent at present on available yearly precipitation. The DSC needs to compare the State Board's flow recommendations, required by the Delta Reform Act, to the alternatives to determine whether any water is available to export. Alternative 2 was suggested by the Environmental Water Caucus because modeling showed that only 3,000,000 ac. ft. is available in wet years for export after the outflow required to restore the Delta estuary is reestablished. The other alternatives rely on "paper water" unavailable without unlawfully continuing the over-appropriation of the Delta estuary.

The Delta Plan ignores the paper water issue completely, thereby allowing the DPEIR to assume water for its alternatives. What is also needed before approving a Delta Plan is a resolution of the issue of whether the state and federal projects are able to export any water from the Delta when area of origin, in-Delta and environmental needs do not get their full supply. By not examining and addressing this issue, the DSC offers no reason (for example through the cost- benefit analysis process described above) that justifies the choice of any alternative other than Alternative 2. The other alternatives cannot meet the State Board's flow recommendations and the DPEIR does not provide any analysis that says they can meet the Plan requirements of the Delta Reform Act. This too violates CEQA.

<u>There Has Been An Impermissible Deferral Of Analysis</u>
<u>Of Legally Required Elements Of The Delta Plan</u>

The Delta Reform Act includes references to two specific long-term milestones. The first reference is to *"Restore large areas of interconnected habitats within the Delta and its watershed by 2100."* (Water Code Section 85302(e)(1)) The second reference is to the incorporation of the Bay Delta Conservation Plan (BDCP) if the BDCP meets the requirements of Water Code sections 85320 and 85321. The BDCP's associated Natural Community Conservation Plan and Habitat Conservation Plan permits are anticipated to be for a 50-year period. If the Council finds that the BDCP meets the standards outlined in statute, the BDCP shall be included in the Delta Plan. If the Council determines that the BDCP fails to meet the statutory criteria listed in Water Code Sections 85320 and 85321, *"the BDCP shall not be incorporated into the Delta Plan and the public benefits associated with the BDCP shall not be eligible for state funding."* (Water Code Section 85320(b))

The DPEIR does not attempt to analyze the BDCP for consistency with the proposed Delta Plan; it instead attempts to develop a Plan without comparing the policies established by the Delta Reform Act and the extensive information already available about the BDCP and its proposed alternatives, including the 15,000 cubic feet per second canal or tunnel. Deferring evaluation of whether the DSC plan, including the BDCP, will be consistent with the Delta Reform Act will in large measure never happen if such a procedure is followed.

Specific Comments on the Delta Plan DPEIR

The following at the specific comments of the groups on the Delta Plan DPEIR:

Executive Summary (ES)-
The ES talks about ecosystem restoration, but nothing about actual restoration goals for the various species affected (ES-2). Delta as place enhancement talks nothing about Delta agriculture (ES-3). The document does not appear to compare the Proposed Project to Existing conditions or adequately describe existing conditions per CEQA Guidelines Sec 15126.6(e)(2)) (ES-4).

The EWC Alternative 2 seems to have been perverted to include agricultural drainage treatment facilities (ES 6- "It involves more facilities to treat and recycle wastewater and agricultural runoff.") like the ones being proposed for the Grasslands Bypass Project and Westlands. It includes less levee maintenance and upgrades and does not include return of the urban water preference in SWP contracts or return of the Kern Water Bank to state ownership (ES 6). The DPEIR notes that Alternative 2 would reduce toxic drainage in the Tulare Basin by retiring the 380,000 acres in the San Luis Unit, but fails to mention the San Joaquin basin and the Delta itself as benefitting from a reduction in selenium, salt, boron and other polluted discharges into the San Joaquin River from the Grasslands Bypass Project and other sources of pollution in that area (ES 8).

Introduction (Chapter 1)
The document says it is NEPA-compliant, even though it doesn't need to be. If it were, then there would be an economic component, which there is not (1-14). Section 1.3.1 (Current Conditions) is not identified as the actual description of the Existing Conditions from which all alternatives are to be compared. However Section 1.3.1 is referenced as Existing Conditions later in Chapter 2 (2A-85). Since the Existing Conditions alternative does not provide quantification of water supplies, water quality performance, percentage of fish or wildlife restoration goals met to date, or other resource areas normally evaluated in a Draft EIR, therefore there is a complete inability to actually compare the other alternatives to Existing Conditions. Dozens of environmental documents have been completed in recent years that clearly describe and quantify Existing Conditions and the No Project alternatives. There is no reason this DPEIR could not do so, but it does not.

Figure 1-1, Project Area (1-15) shows the Trinity River as part of the Project Area, but all of the subsequent analyses completely leave out impacts to the Trinity River, as if it is not plumbed to the CVP and the Delta and a source of water for environmental needs in the Delta or water exports. This is particularly important because Reclamation's Trinity River water permits from the SWRCB are inconsistent with the Trinity River Record of Decision (Trinity ROD) by 474,000 AF and Reclamation has stated that State Water Quality Objectives for the Trinity River approved by USEPA as Clean Water Act 303 standards are not permit requirements that they must comply with.[41] Impacts to the Trinity ROD are not mentioned anywhere in the analysis, nor is the fact that Trinity River Coho salmon (Southern Oregon/Northern California Coho) are listed as Threatened under both the federal ESA and CESA . See more about this subject below.

[41] See 2/23/11 letter from Acting CVP Operations Chief to Brian Person, Trinity Management Council at http://www.c-win.org/webfm_send/141.

Chapter 2 Project and Alternatives

(2A-18 lines 22-30) There are many recommendations and admonitions of activities that "should" occur in the 2003 Bulletin 118, but where are the facts of the success or failure of this DWR planning document?

- "[a]dditional local groundwater management plans should be developed to address groundwater storage and water quality, monitoring programs should be implemented, and local water supply agencies should work with local land use agencies to minimize future impacts on groundwater recharge capabilities."
- "[r]ecommended that DWR should identify groundwater basins or subbasins that have management plans, all agencies should improve data collection and analysis for all groundwater basins, and agencies that replace water sold for water transfers manage the groundwater in accordance with groundwater management plans.

How are the lofty goals highlighted above monitored not only for completion, but also for effectiveness? In an attempt to answer this question, it is essential to point out that there are many problems with local monitoring programs in the Sacramento Valley counties that truly leave management as merely a goal not a reality. Examples include:

- *Monitoring protocols of impacts to the region have not been developed.* Ken Loy, Hydrogeologist with *West Yost* Associates, explained during a December 16, 2011 groundwater workshop that impacts (such as subsidence and stream leakage) to the region will not occur in "real time" as the water is extracted from deep aquifers. He emphasized that impacts will occur over time, will be delayed, and persistent. Loy also explained that impacts will result from cumulative demands on the aquifer system. Since groundwater substitution transfers constitute a potentially large and new demand on the aquifer system, agencies that participate in such transfers have an increased responsibility to anticipate, monitor and mitigate injury that may result over time.

- Long term Impacts associated with regional use of the Tuscan aquifer formation will occur in the up-gradient recharge portion of the system. County ordinances and Basin Management Objectives (BMO) are being put forth by these Guidelines and by state/federal agencies as the primary, if not the only, mechanisms of monitoring and mitigating impacts associated with GW substitution exports. As BMO noncompliance levels are exceeded year after year in Butte and Glenn counties with no action in place to resume compliance with the basin objectives it is clear that BMOs and ordinances are not backed up by the political will or scientific specificity to manage aquifer resources. This local challenge is dwarfed by the inability of county efforts to manage a regional resource. Butte County staff clearly communicated this deficiency in the 2007 Needs Assessment for the Tuscan Aquifer Monitoring, Recharge, and Data Management Project as follows:

> "Each of the four counties that overlie the Lower Tuscan aquifer system has their own and separate regulatory structure relating to groundwater management. Tehama County, Colusa, and Butte Counties each have their own version of an export ordinance to protect the citizens from transfer-related third party impacts. Glenn County does not have an export ordinance because it relies on Basin Management Objectives (BMOs) to manage the groundwater resource, and

subsequently to protect third parties from transfer related impacts. Recently, Butte County also adopted a BMO type of groundwater management ordinance. Butte County, Tehama County and several irrigation districts in each of the four counties have adopted AB3030 groundwater management plans. All of these groundwater management activities were initiated prior to recognizing that a regional aquifer system exists that extends over more than one county and that certain activities in one county could adversely impact another. ***Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system."*** [emphasis added]

- Butte County's 2011 Basin Management Objectives report compares the quantity of groundwater to previous years, but does not assess the status of the streams or of the groundwater dependent vegetation. This is and has been a failure to comply with SB 1938, but the BMO report does not explicitly disclose this important fact. SB 1938 states, "The local agency shall adopt monitoring protocols that are designed to detect changes in... flow and quality of surface water caused by groundwater pumping in the basin."

We note in the DPEIR that it "also was recommended that Bulletin 118 be updated every 5 years; however, this has not occurred." DWR's failure to follow its own recommendation does not inspire confidence.

Chapter 2A Proposed Project and Alternatives

Section 2.1.2.1 states that regulatory actions of state agencies are exempt from being a "covered action" in the Delta Plan. It states that CESA permits by DFG are exempt. If that is the case, then the BDCP is an exempt action because it includes an NCCP that is a CESA permit. It's a rigged outcome, as there will be no opportunity to fight incorporation of BDCP into the Delta Plan, regardless of how bad it is (2A3). It goes on later to say "However, the underlying action requiring the take permit could be a covered action and, if it is, it must be consistent with the Delta Plan's policies. Therefore, even when a covered action is regulated by another agency (or agencies), the action still must be consistent with the Delta Plan." (2A4) Nonetheless, if that action is the BDCP and that's part of the Delta Plan, then it won't be a covered action and is not subject to review because the Delta Stewardship Council is required to adopt the BDCP if it meets certain statutory requirements. If and when the Peripheral Canal/Tunnel goes for permits, since the BDCP will be a part of the Delta Plan, it will be considered consistent, regardless of whether it actually is.

The Proposed Project is not much different from the No Action Alternative. It's generally a regurgitation of existing and in-process programs and plans. For instance, it includes a lot of the same projects that are ongoing anyway such as the Grasslands Bypass Project (GBP), CVRWQCB's new Drinking water policy, major water storage investigations, habitat restoration, CV-SALTS, etc. However, it's pretty vague on specifics. For instance it says less water will be exported from the Delta but doesn't say how much, nor does it say what the "existing condition" of such exports is, which is a matter of great debate since 2011 Delta exports set records. The Proposed Project does not state that BDCP's purpose and need is to deliver "full contract deliveries" to CVP and SWP contractors, which is a contradiction to the

Proposed Action that would reduce Delta deliveries to those same contractors. USEPA[42] and a coalition of EWC members[43] including C-WIN, CSPA and AquAlliance wrote to David Hayes stating concern with "full contract deliveries" and requesting that language be eliminated from the BDCP Purpose and Need. The response from David Hayes to the Coalition denied the request[44].

The Proposed Action really isn't a legitimate CEQA alternative and can't be defined in a number of areas, such as regulatory, other than to encourage the SWRCB to implement some sort of enforceable but undefined Bay –Delta Outflow Proceeding. It says nonsensical things for the TMDL section like "Selenium for the San Joaquin River, Grasslands, and Salt Slough is adopted" (2A-43) but fails to mention that Basin Plan water quality objectives for selenium are not enforced in Mud Slough and portions of the San Joaquin River and won't be until 2020, and then it will probably be extended again. It just assumes projects such as the GBP will ultimately be successful, which is very questionable for most if not all of the regulatory programs that it lists as under or similar to the Proposed Action (2A42-43). It goes on further to say that funding may limit any progress on improving water quality (2A43), thereby reducing expectations of any progress in water quality.

Despite statements like that, the Delta as Place portion of the Proposed Project talks optimistically about more state parks and recreational facilities at a time when many California State parks are scheduled for closure due to budget constraints. Basically the fluff is puffed up with positive expectations that can't be met (Delta parks and recreational facilities) and the substantial issues (enforcement of water quality laws) are watered down with reduced expectations due to lack of funding.

The document tries to avoid talking about a peripheral canal (PC) or tunnel and instead talks generally about new "conveyance" and uses the example of the North Bay Alternative Aqueduct Project, claiming that "Conveyance facilities also could be used to develop a new intake/diversion location in an area that has higher water quality or reduces adverse impact to the aquatic habitat compared to existing intake/diversion facilities. This type of conveyance project is being considered…" (2A-43). But what if the project improves water quality for exporters but harms in delta users and the aquatic habitat like a PC that increases diversions? There is no discussion of the PC's potential impact of further impairing water quality due to increased residence time and concentration of pollutants in Delta because most of the fresh water will be removed from the Sacramento River. Similar to BDCP it tries to portray the PC as a good thing for the environment by not disclosing negative impacts, or in this case, not even describing what "conveyance" actually is. Since the BDCP is required to be incorporated into the Delta Plan (if it meets certain requirements), this DPEIR should disclose what it is likely to be, even if it's not finalized. Restatement of the BDCP Purpose and Need to meet "full contract deliveries" would be a big first step toward disclosure.

Section 2.2.3.1.7- Agricultural Treatment Facilities (2A-45) contains erroneous information. It says land was retired to reduce pollution when actually land was retired because it was too

[42] EPA June 10, 2010 Letter from Alexis Strauss and Enrique Manzanilla to D. Glaser, R McInnis and R. Lohoefener. RE Purpose Statement for Bay Delta Conservation Plan (BDCP) see: http://www.epa.gov/region9/water/watershed/pdf/EpaR9Comments-BdcpPurpose-ExportPolicy.pdf

[43] http://www.c-win.org/webfm_send/163

[44] Letter from David Hayes to Tom Stokely, C-WIN, August 5, 2011. See: http://www.c-win.org/webfm_send/201

salted up with high groundwater (boron too), making it impossible to farm. As far as selenium goes, it does not limit agricultural production, but salt and boron do. The DPEIR talks about land fallowing but fails to mention the CVPIA land retirement program and its status (which is basically dead except for the 100,000 acres that have already been retired through various programs). The DPEIR fails to mention the $2.7 billion San Luis Drainage Feature Re-evaluation EIS and ROD from 2007 (SLDFR) and basically says that "It is not known at this time what types of actions would be implemented to reduce water quality effects of agricultural practices." The document completely skirts making any commitments or description of alternatives to resolve the selenium problems and even fails to mention the latest wish/hope technology- reverse osmosis and bio-treatment. It even suggests groundwater injection of treated saline pollution, which was taken off the table as a viable alternative through SLDFR years ago. It just says that some alternatives may be implemented in the future (or may not). The DPEIR is not even current on what is going on with drainage from toxic lands.

Section 2.2.4.1 to 2.2.4.4- Overview of Flood Risk Reduction (2A-46) The DPEIR talks extensively about existing and proposed Delta Levee and Floodplain improvement projects but really doesn't provide any quantitative or qualitative discussion of the differences between No Action and the Proposed Project, let alone the differences between Existing Conditions and No Action. The Proposed Project is supposed to be compared to Existing Conditions (CEQA Guidelines Section 15126.6(e)(2) but there is no quantitative analysis anywhere in the document on acres of floodplain protected by levees under the various alternatives. A basic discussion of how many miles of levees to be replaced or upgraded would suffice.

Financing (Section 2.2.6 (2A-55)- The DPEIR cites several funding mechanisms recommended by the Delta Plan, but fails to mention any funding for recreational facilities/Delta as Place. It then summarily dismisses all of the potential environmental impacts of potential fees/bonds, etc. by saying they won't cause any environmental impacts because they are just recommendations for other agencies to implement. What about impacts of reduced General Fund revenues (because of paying off bonds $2 for every $1 spent) on other programs such as Fish and Game wardens, water quality enforcement, etc.? The lack of General Fund money due to bond indebtedness could cause significant adverse environmental impacts that should be disclosed and are not. Clearly this "project" relies on Bond money and it should therefore have a basic discussion of how Bond money robs the General Fund of money for basic services.

Scoping- It seems that many of the scoping comments were dismissed, such as quantifiable performance measures to identify success and definitions of reliable water supply and Delta ecosystem restoration. There is no explanation of why these comments were rejected.

Alternatives- The Proposed Action is vague and really not very distinguishable from No Project except it assumes slightly less Delta exports (without disclosing specifically what are Delta exports under No Project, under Proposed Project and under Existing Conditions), new conveyance, new storage and a new recreational facilities that can't possibly be funded or maintained, as well as undefined habitat restoration.

Existing Conditions is not clearly defined. Chapter 2 (2A-85) indicates that Section 1.3 in Chapter 1 is the description of Existing Conditions. However, there is no quantification of Delta exports or modeling of an environmental baseline of any sort that is normally used in this type of environmental document. Nor is there quantifiable information on any other resource area from which to compare the various alternatives to Existing Conditions.

Alternatives 1A and 1B- There is no discernable difference between these two alternatives. They differ from the proposed action in that they don't reduce Delta exports or implement a SWRCB Delta outflow proceeding. The reader can't really tell the difference between the two other than all policies would be recommendations under Alternative 1B. Under 1A, only one policy regarding reliable water supply is changed to a recommendation. In either case since the DSC doesn't really have control other than to disapprove "covered actions." There are some minor and unquantifiable differences between the 2 alternatives such as the degree of levee maintenance, invasive species reductions and habitat restoration. It is all so vague that it's very difficult to see significant differences between the two alternatives and as is the case with all alternatives, there is no effort in the DPEIR to quantify differences or impacts.

Alternative 2- (2A-69) The DPEIR seems to have missed several key points of the EWC alternative as also pointed out by the Environmental Water Caucus in previous comment letters on the DSC Plan incorporated by reference herein. Those points include, but are not limited to, deleting the fish passage program recommended by NMFS at upstream Bay/Delta watershed dams, re-instating the urban preference for municipal and industrial users in low water years, returning the Kern Fan to state ownership, and improving existing levees and the South Delta export facilities to stop killing endangered fish.

In addition, **Agricultural Drainage Treatment** is incorrectly characterized in Alternative 2. The DEIS includes statements that there would be more agricultural drainage treatment facilities than the Proposed Action and possibly Existing Conditions. This is incorrect. If the 380,000 acres toxic lands within the San Luis Unit are not irrigated per the EWC's Alternative 2, there won't be a need for more drainage treatment plants like the one proposed for the Panoche Drainage District/Grasslands Bypass Project and ultimately for all of Westlands drainage impaired lands. The U.S. Geological Survey (USGS), in Open File Report No. 2008-1210 states that "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired.*"[45] The Bureau of Reclamation's own analyses for the San Luis Drainage Feature Re-evaluation (SLDFR) shows land retirement as the most cost effective way to reduce drainage. The National Economic Development Act Summary for SLDFR[46] showed that the alternative with the most land retirement was the only alternative that had a positive cost/benefit. According to the Environmental Working Group, if the cost of crop subsidies to these impaired lands is considered, the annual losses under the Preferred Alternative for SLDFR doubles from $10 million/year to $20 million/year.[47] The Bureau admits in its Feasibility Report for SLDFR that such treatment facilities are not cost effective, require additional public subsidies for the affected districts and have not yet been able to work on the scale envisioned for the western San Joaquin/Tulare basins, yet they continue down that path.[48]

Other inconsistencies between Alternative 2 and the EWC recommendations are as follows:

[45] http://pubs.usgs.gov/of/2008/1210/; accessed 4/18/2010
[46] http://www.c-win.org/webfm_send/202
[47] Environmental Working Group, "Throwing Good Money at Bad Land", 2007, see http://ewg.org/Throwing-Good-Money-at-Bad-Land
[48] See San Luis Drainage Feasibility Report, U.S. Bureau of Reclamation, March 2008. See http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html

Alternative 2, Page 2A-69.
Improper characterization of the EWC Alternative 2 as advocating more ocean desalination. The EWC Alternative does not advocate ocean desalination.

Table 24, Page 2A-71, Alternative 2, Storage. The EWC Alternative 2 did not recommend expansion of Friant/Millerton reservoir; there was no comment related to Friant/Millerton.

Table 24, Page 2A-72, Alternative 2, Conveyance. The reference to the EWC agreement with the recommendation to complete BDCP was in the described context of consistency with the provisions of the Delta Reform Act; the EWC also stated that it is unlikely to lead to BDCP meeting either the statutorily mandated flow requirements or the water quality standards envisioned in the Delta Plan, and as such, would likely not meet the recovery objectives. The EWC's qualification is important to include since it expresses doubts that BDCP can actually achieve the reliability, ecosystem goals, and water quality goals of the Delta Plan. (CEQA Guideline 15146, Degree of Specificity).

Table 24, Page 2A-72, Alternative 2, Conveyance. The EWC Alternative 2 made no recommendation regarding abandonment of South Delta intakes as indicated in Table 24; this error must be corrected. The EWC Alternative 2 also includes the screening of existing South Delta pumps.

Table 24, Page 2A-74, Alternative 2, Ecosystem Restoration. The EWC Alternative 2 is incorrectly characterized as "Less emphasis than Proposed Project on ecosystem restoration throughout the Delta…" In the EWC's comments on the Fifth Draft of the Delta Plan, we indicated the following: "We agree with the Council's reliance on the *Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions* (DFG 2011). The EWC also supports most of the Ecosystem Restoration Program features of the CALFED program. The finding in the Table that Alternative 2 places less emphasis than the Proposed Project on ecosystem restoration throughout the Delta is in error and it should indicate that Alternative 2's emphasis on Ecosystem Restoration is the same as or similar to the Proposed Project.

Table 24, Page 2A-79, Alternative 2, Flood Risk Reduction, Levee Design Standards. The characterization of the EWC Alternative 2 as "Less emphasis than Proposed Project on reducing flood risk for all lands in the Delta areas…" does not consider the EWC recommendation to immediately initiate planning to upgrade core levees above the
PL88-99 standard, in accordance with the recommendations of the Delta Planning Commission. This action, if reinforced by the Delta Stewardship Council, would significantly reduce Delta earthquake and sea level rise vulnerabilities. (CEQA Guideline 15126.5, Discussion of Alternatives).

Table 24, Page 2A-80, Alternative 2, Flood Risk Reduction, Prioritization for Levee Construction. Same comment as immediately above, Page 2A-79.

Summary of Section 2A. With the above corrections or modifications applied to Section 2A, there is little or no basis for selecting the Proposed Project as the Environmentally Preferred Alternative instead of Alternative 2." The only stated reason Alternative 2 isn't a better alternative than the Proposed Project is due to the large amount of land retirement, including 380,000 acres in the San Luis Unit and 320,000 acres in the Tulare Basin for Tulare Lake Basin

Reservoir, as well as potentially more land fallowing due to the limitation in Delta exports at 3 million AF (again, not quantified). However, it is clear that no solution is in place for the 380,000 acres of San Luis Unit drainage impaired lands either financially, technically or otherwise authorized by Congress at necessary funding levels. Ultimately, like the 100,000 acres already retired due to soil salinization, the full 380,000 acres (that includes the existing 100,000 acres) will go out of production anyway unless they are allowed to reopen the San Luis Drain and dump all of the San Luis Unit's pollution into the San Joaquin River (which definitely won't help the Delta and even BDCP doesn't propose this drastic measure). Efforts to maintain arability in the root zone of those lands through drainage treatment will require substantial increased public subsidies. According to Reclamation's 2008 Feasibility Report for San Luis Drainage Feature Re-evaluation:

> *To provide drainage service to the San Luis Unit, neither of the action alternatives is economically justified by the Federal government. For the Federal government to provide drainage service to the San Luis Unit, neither of the action alternatives is financially feasible, within existing authorities.* [49]

The Feasibility Report also found that substantial increased subsidies and Congressional funding authorization would be necessary to implement the Preferred Alternative: [50]

- Increase the funding authorization for the San Luis Act by $2.69 Billion (2006 indexing)
- Waive the required collection of full Operation and Maintenance funding (and interest), including payments to the CVPIA Restoration Fund per Section 5 of the Reclamation Act for providing drainage service to Panoche, Pacheco and San Luis Water Districts.
- Authorize indefinitely waiving repayment of San Luis Unit contractors' contractual obligation for repayment of reimbursable capital and/or reimbursable Operation and Maintenance costs incurred to implement the Preferred Alternative AND the remaining reimbursable capital costs incurred to construct pre-existing CVP facilities until the contractors can "afford to pay" their bills.

The Feasibility Report also found that if the Preferred Alternative were implemented, the CVPIA Restoration Fund would be adversely affected because the San Luis Unit contractors will be unable to pay into the CVPIA Restoration Fund and there is a pre-existing prohibition on reassigning drainage costs to CVP power customers.

The proposed Panoche Demonstration Selenium Treatment Facility will cost an estimated $37 million just to remove selenium from drainage, not salt or boron. At a treatment rate of 200 gallons per minute 24/7 for 18 months (470 AF), the cost of treating agricultural drainage only for selenium is $78,723/AF, not counting transportation and disposal of the processed solid waste to a hazardous waste facility. Even at that cost, the potential for success is low. Previous attempts to use reverse osmosis have failed. A 2010 Report by CH2MHill for the North American Metals Council[51] determined the following:

[49] See page 97 http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html
[50] Ibid. p xxvi
[51] Review of Available Technologies for the Removal of Selenium from Water, CH2MHill, June 2010. See http://www.namc.org/docs/00062756.PDF, page 8-2.

"While these physical, chemical and biological treatment technologies have the potential to remove selenium, there are very few technologies that have successfully and/or consistently removed selenium in water to less than 5 μg/L at any scale. There are still fewer technologies that have been demonstrated at full-scale to remove selenium to less than 5 μg/L, or have been in full-scale operation for sufficient time to determine the long-term feasibility of the selenium removal technology. There are no technologies that have been demonstrated at full-scale to cost-effectively remove selenium to less than 5 μg/L for waters associated with every one of the industry sectors."

Continued irrigation of the 380,000 acres of drainage impaired lands in the San Luis Unit will result in continued decline of soil productivity and will ultimately cause retirement of the land because it cannot support agriculture. Irrigation of these lands can only continue with huge subsidies and/or discharge of the toxins to the San Joaquin River and Delta. Therefore, continued irrigation of these lands does not meet the Delta Plan Financing Framework's key tenets (2A-55) for cost effectiveness and stressors as follows:

- Beneficiaries (those who benefit from the water resources of the Delta and its watershed) should pay for the benefits they receive
- Stressors (those whose actions adversely affect the Delta ecosystem) should pay for the harm they cause the ecosystem.

Taking into account the fact that Alternative 2's ultimate impact on agriculture by retirement of those 380,000 acres is really no different than Existing Conditions, No Action or the Proposed Action, it removes one reason that Alternative 2 cannot be environmentally preferred to the Proposed Action.

Mitigation for Alternative 2 impacts on fugitive dust: The Alternative 2 significant negative impact of fugitive dust from fallowed or retired lands could be fully mitigated by not disking and/or growing dry land crops and/or re-establishing native vegetation.

Chapter 3- Water Resources

Overall, this chapter is completely lacking in any kind of quantitative analysis of water resources affected by the Delta Plan in upstream and downstream areas as well as the Bay-Delta itself. For instance, the Trinity River Record of Decision is completely left out of the analysis as a guiding force for Trinity River Division operations. There is a complete lack of disclosure let alone analysis of temperature and flow standards for the Delta and all of its tributaries, artificial or natural, reservoir carryover storage, operations or anything that could possibly provide the reader with a method to compare the different alternatives with each other and Existing Conditions.

(3-1) Study Area
The Trinity River must be mentioned in the text that reflects the map on Figure 3-1. We also believe that the Pit and McCloud rivers should also be included in the text and in Figure 3-1.

(3-3)- Environmental Setting/Major Sources of information- This section should include the Trinity River Mainstem Fishery Restoration EIS/EIR (USFWS/BOR/HVT/Trinity County, 1999) and the Trinity River ROD (Interior 2000). It is a major omission regarding water operations for this important "Delta Tributary Watershed" (Water Code Section 78647.4 (b).

The 2006 Sacramento Valley Integrated Regional Water Management Plan does not represent the interests, needs, and values of the region. It was crafted by water districts that intentionally excluded the public and NGOs from visioning, describing the environmental setting, plan creation, and governance. It is inappropriate to use the SVIRWMP as a source document to describe the environmental setting for the watershed that is so vital for California.

(3-5) Figure 3.2- This map doesn't even show that the Trinity River exists downstream of Lewiston Dams. This is a serious omission considering that the Trinity River Division of the CVP (TRD) is operated in part to regulate flows on the Trinity River in order to meet the tribal trust obligation that Interior has to the Hoopa Valley and Yurok Tribes.

(3-6) It is unclear what evidence and analysis is in the DPEIR to reach the following conclusion:

> "With the growing limitations on available surface water exported through the Delta, and the potential impacts of climate change, reliance on groundwater through conjunctive management would become increasingly more important in meeting the state's future water uses." Conjunctive management, the way it is proposed in the Sacramento Valley, has the potential to replicate the destructive practices that left the Owens and San Joaquin valleys bereft of water, vegetation, and species that depend on healthy hydrology.

We appreciate the DPEIR's acknowledgement that, "A comprehensive assessment of overdraft in the state's groundwater basins has not been conducted since Bulletin 118-80 in 1980, but overdraft is estimated at between 1 to 2 MAF annually (DWR 2003, p. 2)." In light of the deficit of analysis since 1980 and the use of only an estimate of overdraft, albeit one that is massive with tremendous range, what data and analysis have been used to justify the expansion of past practices like conjunctive use, conjunctive management, and water transfers with groundwater substitution? The immense failures of water management in California have already caused extensive overdraft (see DPEIR Figure 3-4 for critically overdrafted basins; pp 3-12 to 3-13) and the collapse of fisheries and ecosystems.

(3-9) The DPEIR must include historic data that covers centuries, not simply "decade time scales." Major climate change has occurred at millennial, decadal, and annual scales in the history of the Sierra Nevada. The regional climate developed from warm, wet, tropical conditions about 65 million years ago through a cycle of at least eight major glacial and interglacial periods of the last million years to the winter-wet, summer-dry pattern of the last 10,000 years. These climatic periods have greatly influenced vegetation, animals, and human populations; their effects are observable today and influence how people manage resources. For instance, two extensive droughts, each lasting 100 to 200 years, occurred within the last 1,200 years. During the cold phase of the Little Ice Age (about a.d. 1650-1850), glaciers in the Sierra Nevada advanced to positions they had not occupied since the end of the last major ice age more than 10,000 years ago. The period of modern settlement in the Sierra Nevada (about the last 150 years), by contrast, has been relatively warm and wet, containing one of the wettest half-century intervals of the past 1,000 years. (http://ceres.ca.gov/snep/pubs/web/v1/ch01/v1_ch01_02.html)

The following statement, "… where supplemental water supplies are needed…" should be changed to read "… where supplemental water supplies are wanted…" since "need" has been

and still is currently based on speculative urban and agricultural expansion. The word "needed" in the following sentence should also be changed to "wanted." "Over time, the natural pattern of water flows continued to change as the result of upper watershed diversions and the construction of facilities to divert and export water through the Delta to areas where supplemental water supplies are needed, including densely populated areas such as San Francisco and Southern California and agricultural regions such as the San Joaquin Valley and Tulare Lake." The DPEIR fails to focus on the demand side of water in California and the ability to control demand in more ways than increasing supply with very costly infrastructure.

(3-10, lines 18-19)- It is important to note that largemouth bass showed a clear increase in Se concentrations 1999-2007 in Appendix E, Table E-1. Selenium contamination is not going away.

(3-11, lines 11-15)- We agree-the authors correctly identified that the major source of selenium to the Delta is agriculture from the San Joaquin Valley.

(3-12, lines 1-2)- Appendix D, Table D-2 only identifies the draft EIS for San Luis Drainage Feature Re-evaluation, not the final ROD of 2007 which identified a preferred alternative to treat drainage from 180,000 acres and retire 200,000 acres (which also includes the existing 54,000-100,000 acres already retired).

(3-13, lines 41-42)- The document incorrectly states that Delta water users are the largest users of Delta water (up to 1.3 MAF), but then says "After local users, the major users of Delta surface water are the CVP and SWP", making it appear that the state and federal pumps export less water from the Delta. This is untrue.

(3-14, lines 34-41)- The document should identify that while the Jones Pumping Plant has a capacity of 4,600 cfs, it is limited to a little over 4,200 cfs due to subsidence, although the State-federal intertie might allow increased deliveries to CVP contractors normally served by the Delta Mendota Canal.

(3-15, lines 1-2)- The document states that CVP/SWP Delta pumping has been significantly reduced since 2007, but fails to mention that 2011 was a record year with exports exceeding any prior year. This is very misleading.

Lines 26-13- This section mentions the CVPIA (Section 3406 b2) water but fails to mention CVPIA Refuge Water Supplies (3406 d) and Trinity water (3406 b23). All three sections of CVPIA redirected a significant amount of CVP water to environmental purposes but the document is not clear on the fact that CVPIA accomplished those actions. The DPEIR also fails to mention that most of the water released for fishery purposes under CVPIA Section 3406 b2 is pumped into the canals in the Delta before it reaches the Golden Gate.

(3-16, lines 32-39) As noted above, the McCloud, Pit, and Trinity rivers must at least be mentioned when describing the Sacramento River watershed.

(3-17, lines 10-11)- The DPEIR mentions a volume of water diverted from Whiskeytown Lake to Keswick Reservoir, but does not give a specific average Trinity River export volume, nor does it even cite the 1999 Trinity EIS/EIR and the 2000 Trinity ROD. This is another significant omission. There is no mention of Trinity River Basin Plan temperature objectives, the 2000

NMFS Trinity Biological Opinion, problems with transmission of cold Trinity water through Whiskeytown, the temperature curtains, the temperature control device at Shasta Dam or temperature issues and water quality objectives in the Sacramento River. It also fails to mention the significance of the Trinity River Division in diluting acid mine drainage discharges from Iron Mountain Mine.

(3-18/19 lines 1-40 and 1-5) This section has very limited data, and requires more evidence and supporting facts.

(3-19 lines17-21) The DPEIR asserts that Sacramento Valley "groundwater levels are generally in balance valley-wide with pumping matched by recharge…" What is the basis for that conclusion? The following examples contradict the statement above:

- "It has been long recognized that the Colusa Basin faces significant flooding, drainage, and groundwater recharge problems." (Northern Sacramento Valley Four County Group 2009.)
- Declining groundwater elevations have been observed specifically in Butte County. A 2007 Butte Basin Groundwater Status Report describes the "historical trend" in the Esquon Ranch area as showing "seasonal fluctuation (spring to fall) in groundwater levels of about 10 to 15 feet during years of normal precipitation and less than 5 feet during years of drought." The report further notes: "Long-term comparison of spring-to-spring groundwater levels shows a decline of approximately 15 feet associated with the 1976-77 and 1986-94 droughts (Butte Basin Water Users Association, 2007). The 2008 report indicates that, "The spring 2008 groundwater level measurement was approximately three feet higher than the 2007 measurement, however it was still four feet lower than the average of the previous ten spring measurements. Fall groundwater levels are approximately nine feet lower than the averages of those measured during either of the previous drought periods on the hydrograph. At this time it appears that there may be a downward trend in groundwater levels in this well," (Butte Basin Water Users Association 2008.)
- Professor Karin Hoover, Assistant Professor of hydrology, hydrogeology, and surficial processes from CSU Chico, found in 2008 that, "Although regional measured groundwater levels are purported to 'recover' during the winter months (Technical Memorandum 3), data from Spangler (2002) indicate that recovery levels are somewhat less than levels of drawdown, suggesting that, in general, water levels are declining." According to Toccoy Dudley, "Test results indicate that the 'age' of the groundwater samples ranges from less than 100 years to tens of thousands of years. In general, the more shallow wells in the Lower Tuscan Formation along the eastern margin of the valley have the 'youngest' water and the deeper wells in the western and southern portions of the valley have the 'oldest' water," adding that "the youngest groundwater in the Lower Tuscan Formation is probably nearest to recharge areas." (Dudley 2005.) "This implies that there is currently no active recharge to the Lower Tuscan aquifer system (M.D. Sullivan, personal communication, 2004)," explains Dr. Hoover. "If this is the case, then water in the Lower Tuscan system may constitute fossil water with no known modern recharge mechanism, and, once it is extracted, it is gone as a resource," (Hoover 2008.)

- "Overdraft of groundwater in Sacramento County over the last 6 decades has significantly impacted the magnitude and duration of fall flows on the Cosumnes River." (Fleckenstein, et al. 2004).

Additionally, how and where recharge occurs in the northern Sacramento Valley is unknown. An attempt to develop greater understanding is in its infancy: "Most recently, Butte County received funding through Prop 50 under the DWR Watershed Program to develop a groundwater model to determine run-off and recharge within the watershed areas." (Northern Sacramento Valley Four County Group 2009.)

(lines 22-40) The Sierra Nevada [mountain range] and "Coast ranges" are identified, but there is no mention of the southern Cascade Range that is a prominent geologic feature of the northern Sacramento Valley and a significant contributor to the hydrology of the Sacramento River watershed.

It is also noteworthy that the planning area for the possible Sites reservoir is not mentioned in this section. The Sites project is a proposed offstream storage reservoir located about 10 miles west of the small town of Maxwell in the Sacramento Valley. The water quality problems of Maxwell are mentioned in this paragraph with the "hills to the west" listed as the source,: exactly where a reservoir would be located. These existing water quality problems and the source minerals should be disclosed with any mention of a possible reservoir near Sites and these issues analyzed here. CEQA guidelines' list of "advantages" to preparing a programmatic EIR include a "more exhaustive" examination of effects and alternatives, "full consideration" of cumulative impacts, and allowance for analysis of "broad policy alternatives and program wide mitigation measures" at a time when the lead agency has the best chance to address them and present them to the public. (Cal. Code Regs., tit. 14, § 15168(b).)

(3-19/20) There is brief discussion of general groundwater quality in the Sacramento Valley and some specific mention of TDS, chloride, sodium, sulfate, and nitrates, but there is a noticeable absence of data and discussion regarding hazardous waste plumes and the potential for well contamination. There are significant public health and safety issues associated with large groundwater extractions associated with water transfers and groundwater storage projects as proposed in the DPEIR (pp 20, 3-77, 80, 81), For example, in 1994, following seven years of low annual precipitation, Western Canal Water District and other irrigation districts in Butte, Glenn and Colusa counties exported 105,000 af of water extracted from the Tuscan aquifers to buyers outside of the area. This early experiment in the *conjunctive use* of the groundwater resources caused a significant and immediate adverse impact on the environment (Msangi 2006). Until the time of the water transfers, groundwater levels had dropped but the aquifers had sustained the normal demands of domestic and agricultural users. The water districts' extractions, however, lowered groundwater levels throughout the Durham and Cherokee areas of eastern Butte County (Msangi 2006). The water level fell and the water quality deteriorated in the wells serving the City of Durham (Scalmanini 1995). Irrigation wells failed on several orchards in the Durham area. One farm never recovered from the loss of its crop and later entered into bankruptcy. Although the districts' groundwater substitution was in the deep levels of the aquifer, residential wells dried up in the shallow zone of the aquifer as far north as Durham (Barris 1995).

There is a lack of disclosure regarding the potential impacts from large groundwater extractions associated with conjunctive use, water transfers, and groundwater storage projects that are part of

the Delta Plan and DPEIR (p 3-78/79). As noted above there is the likelihood that water levels may collapse in domestic wells that can lead to serious contamination from heavy metals and non-aqueous fluids. Additionally, there are numerous hazardous waste plumes in most counties in the Sacramento Valley. One example, Butte County, has many hazardous waste plumes that could easily migrate when hydrostatic pressure is altered in the groundwater basin from increased groundwater pumping proposed for the Project. (Todenhagen 2010) All of this must be disclosed and analyzed cumulatively at the programmatic CEQA level.

(3-20/21)- This section should describe the hydrologic contributions and plumbing of the McCloud, Pit, and Trinity rivers in the Sacramento River watershed.. It is a significant omission.

The DPEIR asserts that, "[w]ater diverted for irrigation, but not actually consumed by crops or other vegetation becomes recharge to the groundwater aquifer or flows back to surface waterways and contributes to surface supplies either within or downstream of the Sacramento Valley." It should be noted that if recharge does occur, it would be to the shallow alluvial aquifer, not the source aquifer for most agricultural uses, which is deeper. There also is not mention of evaporation in the irrigation water budget.

(3-22, lines 32-35)- The discussion of water transfers fails to mention that DWR's Drought Water Bank water transfer program was shut down by litigation (after the fact) and that a joint EIS/EIR is being prepared by Reclamation and SLDMWA (a year overdue so far). Please provide citations for the water transfers.

(3-26, lines 26-29)- The document discusses the Basin Plan amendment for the Grasslands Bypass Project to "address selenium control" but fails to mention it was really an amendment to waive implementation of Basin Plan selenium water quality objectives for another decade because they can't meet them now and there is no technology other than land retirement that has been proven to work.

(3-27, lines 28-35)- The DPEIR leaves a great deal out of the discussion regarding the Cosumnes River groundwater basin. Examples include:

- "Overdraft of groundwater in Sacramento County over the last 6 decades has significantly impacted the magnitude and duration of fall flows on the Cosumnes River. The decline in fall flows is a primary stressor of spawning success of fall-run Chinook salmon." (Fleckenstein, et al. 2004).
- "Annual groundwater deficits are on the order of several hundred million cubic meters." *Id*

When "groundwater storage capacity" is provided here and in other sections, what does the estimated amount bring to the discussion or analysis? Does it play a role in the Project description or the alternatives? For example, is it viewed as a source of export water, as necessary for local hydrology, or, in this case, as essential for local hydrology and species as noted above? If the Consumnes River basin and other groundwater basins are part of the Project and alternatives, they must be analyzed and presented to the public.

(3-29, lines 9-10)- The statement below Table 3-2 describes "many" groundwater basins as removing more water than is recharged, but actually it is "most" (5 out of 6). Only the Chowchilla basin appears to not be removing more water than is recharged. The text is misleading as it relates to the data in the table.

(3-32)- Surface Water Use- This section is an appropriate place to identify the large amount of paper water in the San Joaquin Basin. If such information were disclosed, it would point out that the San Joaquin and its tributaries are completely over-allocated and therefore the various water permits should be licensed to eliminate paper water. The South SJID, Turlock ID and Merced ID descriptions in the DPEIR should include a description of the acres served by the districts.

(3-33, lines 1-2)- The document notes that the CVP provides "surplus" CVP water to contractors in San Felipe and San Joaquin areas. It should further note how much of that water is paper water and the fact that there hasn't been 100% delivery of contract water for many years and it is unlikely to do so in the future. Again, disclosure of that information would lead to a conclusion that there is a significant amount of paper water within the CVP, and licensing of BOR's CVP permits to eliminate paper water is necessary (along with reduction in contract amounts to correspond with actual availability of water).

(3-34, lines 6-7)- There should be a discussion of how the VAMP has failed here and what factors led to that failure. See Hankin 2010.[52]

(3-40, lines 1-3)- The document fails to mention that selenium and boron can also be pollutants in local groundwater making it unfit for use. Even 1 ppb of boron can adversely affect crops.

(lines 29-34)- This section fails to mention the 2007 San Luis Feature Re-evaluation Record of Decision (SLDFR ROD) that selected a different alternative than the one cited in this DPEIR. The "In-Valley Water Needs Land Retirement" alternative that includes 194,000 acres of land retirement was selected, not the "In Valley/Drainage Impaired Land Retirement" Alternative, which would have actually retired 298,000 acres. Both alternatives include an existing 54,000 acres of retired land.[53] The DPEIR incorrectly portrays the final decision, but it is notable that in the SLDFR DEIS, the environmentally preferred alternative was the In Valley/Drainage Impaired Land Retirement Alternative because it had the most land retirement and a positive National Economic Development (NED)Act cost/benefit analysis. Nonetheless, Reclamation requested and received a waiver from the NED requirement to otherwise adopt the most cost effective alternative and instead chose a financial loser- the "In-Valley Water Needs Land Retirement" alternative. Existing efforts to "solve" the drainage problem through cost effective large scale technologies have failed.[54] The U.S. Geological Survey (USGS), in Open File Report No. 2008-1210 states that "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired*."

[52] http://www.sjrg.org/peerreview/review_vamp_panel_report_final_051110.pdf
[53] SLDFRE ROD, Bureau of Reclamation, March 2007.
See http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2598 page 13.
[54] CH2MHill, "Removal of Available Technologies for the Removal of Selenium from Water," for the North American Metals Council, June 2010. Conclusion, Pages 8-1 and 8-2.

(3-44) Conjunctive Use- This section should mention that C-WIN, CSPA, South Delta Water Agency, Central Delta Water Agency and the Center for Biological Diversity have filed two lawsuits to return the Kern Water Bank to state control, and that it is part of Alternative 2.

(3-48, lines 9-10)- This section states that environmental water use is 58% of the Bay Area's water use, but provides no clarification if this is "developed" water or just flows through the Golden Gate Bridge. It creates an impression that most of Bay Area's developed water is used for the environment, which is untrue.

(3-50/51)- Environmental Water Use- This section still doesn't explain or quantify the 58% figure given for environmental water use. It implies that dam releases for fish are bigger than they are, or that they don't get pumped out before they reach salt water. The document needs clarification in this regard.

(3-74, lines 12-15)- The DPEIR mentions an agricultural drainage reclamation project in the San Joaquin Valley but provides no citation or source for this information or its status. Is it already happening, in planning stages, waiting government subsidies, etc.? What is the source water? To date, no project has been able to successfully treat San Joaquin Valley agricultural drainage water on a large scale and cost effectively other than land retirement (USGS Open File Report No. 2008-1210).

(3-77) Thresholds of Significance- In addition to a threshold for impacts to water supplies outside of the Delta that use Delta water, it should also include the following:

- Substantially change water supply availability to water users located upstream of the Delta (area of origin/senior water rights holders, Sacramento River and tributary rivers and streams' fisheries, etc.).
- Substantially change water supply availability and quality to in-Delta water users.

The violation of water quality objectives and standards should include specifics such as temperature, salinity, etc., but the document does not disclose the myriad water quality standards that are being violated regularly today and how frequently the various alternatives would be expected to violate those standards and WDR's in the future. The analysis is therefore incomplete.

The second bullet regarding substantial depletion of groundwater must also include:

- Substantially depleted surface waters due to depleted groundwater supplies.
- Substantially higher stream temperatures that will result in aquatic and terrestrial species mortality and threaten reproductive success.

3.4.3 Proposed Project- None of the analyses for the Proposed Project compare it to Existing Conditions per CEQA requirements even though the other alternatives are compared, at least qualitatively to Existing Conditions. There is no quantitative analysis of any of the alternatives compared to Existing Conditions or each other.

(3-79)- Effects of Project Operations- The document does not but should disclose how well different alternatives meet reservoir cold water carryover storage requirements for Shasta and

Trinity and other reservoirs which have cold water carryover requirements in Biological Opinions or other permit requirements.

(lines 2-19) Sites reservoir, the potential North-of-the-Delta Offstream Storage project, has considerable potential to violate water quality as noted above (p 3-19 comments). The DPEIR's findings - that potentially significant impacts will be avoided by future mitigation - violates CEQA, in that CEQA does not allow such deferral where substantial questions remain regarding whether such mitigation can feasibly accomplish the stated objective.

(lines 13-19) Because the Los Vaqueros expansion project EIR found that "the project would not result in significant adverse changes in Delta water quality that could cause the violation of a water quality standard," it does not follow that *all* other storage projects will be able to make that finding nor that the statement is actually accurate in fact or in practice. It also does not remove responsibility from the lead agency to analyze direct, indirect, and cumulative impacts at the programmatic level. We find no disclosure, analysis, or proposed mitigation for all impacts at the programmatic level.

(lines 32-37) The DPEIR's conclusion that, "The number and location of all potential projects that would be implemented is not known at this time," may be accurate enough for the lead agency, but it indicates that the DPEIR was not ready for prime time. Programmatic CEQA review requires more detail than complete deferral into the future. The DPEIR is preparing to potentially approve, at a programmatic level, reservoirs, groundwater banking, conjunctive use, water transfers, a peripheral canal or tunnels, ocean desalination, and other infrastructure to enable the other projects. The project area is defined on page 1-14. The lead agency may not know the *exact* number and *exact* location of all potential projects, but it is disingenuous to exclude the geographic locations and actions that are planned in the document that led to this environmental review: the 5th Staff Draft Delta Plan.

(3-80/81)- The DPEIR rightly concludes that, "Long-term operation of a groundwater storage facility encouraged by the Delta Plan would by definition result in significant fluctuations in local groundwater levels." The impacts could be devastating, but the DPEIR defers to local management as the mechanism to protect the groundwater basins. "Rising groundwater levels would occur as artificial recharge is induced into the aquifer system, followed by groundwater level declines during subsequent removal of groundwater from storage. There is currently no statewide groundwater management legislation that would regulate this type of facility. However, any operating groundwater storage facility would be subject to local groundwater management regulations (basin adjudications, county ordinances, or local groundwater management plans), as described in Appendix D." Provided above are many examples of the inadequate nature of local ordinances and plans above (2A-18 lines 22-30), which also apply here.

(3-80/81) - Effects of Project Operations- Groundwater transfers, Impact 3-2a: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge

The DPEIR rightly concludes that, "Long-term operation of a groundwater storage facility encouraged by the Delta Plan would by definition result in significant fluctuations in local groundwater levels." The impacts could be devastating, but the DPEIR defers to local management as the mechanism to protect the groundwater basins. "Rising groundwater levels would occur as artificial recharge is induced into the aquifer system, followed by groundwater

level declines during subsequent removal of groundwater from storage. There is currently no statewide groundwater management legislation that would regulate this type of facility. However, any operating groundwater storage facility would be subject to local groundwater management regulations (basin adjudications, county ordinances, or local groundwater management plans), as described in Appendix D." Provided above are many examples of the inadequate nature of local ordinances and plans above (2A-18 lines 22-30), which also apply here.

(3-81 lines 15-38) This section denies impacts from water transfers involving groundwater by citing a Yuba Basin groundwater transfer EIR and project. The DPEIR fails to describe how this single EIR and project varies greatly from plans and projects completed and proposed in the Sacramento Valley, the location where, "These types of activities and related impacts are most likely to occur…" Please consider:

- During the 1994 Drought Water Bank, the amount of surface water transfers that involved groundwater pumping was not "within historic ranges" in Butte County as the DPEIR asserts transpires with the Yuba County transfers. As described above, many wells went dry in Butte County as a result of DWR's 1994 Drought Water Bank groundwater transfers (see comments for 3-19/20).
- The DPEIR does not disclose existing conditions (see comments for p 3-19 for examples) and the impacts that are well known from 1994.
- Recently past and current proposals for water transfers that involve groundwater propose vastly more that "historic levels." For example:

    - Drought Water Bank 2009 (340,000 af)
    - North-to-South, Ten Year Water Transfer Program, Bureau of Reclamation (600,000 af) http://www.usbr.gov/mp/cvp/ltwt/docs/FederalRegisterNoticeTenYearTransfers.pdf
    - *Groundwater/Conjunctive Management* presentation to the State Water Commission where the author presents "Aquifers are emptied" from the "Full aquifers in the Sacramento Valley," (Hauge 2011) http://cwc.ca.gov/cwc/docs/Hauge%20Groundwaterfinal%20sep11.pdf

A finding of no significance from the proposed project is unjustified.

(3-82)- 3.4.3.1.3 Impact 3-3a: Substantially Change Water Supply Availability to Water Users That Use Delta Water- If the Proposed Action would actually reduce Delta exports, there would be an impact here, but it does not analyze that quantitatively, it cannot make a finding of no impact.

(3-84) 3.4.3.2.2 Impact 3-2b: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge- This section erroneously makes a finding of no impact from the Proposed Action that will increase water transfers using groundwater. The erroneous assumption is that "sustainable groundwater management plans" for areas outside of the Delta will ensure that no groundwater overdraft occurs from groundwater substitution transfers. This very chapter of the DPEIR shows several areas of California with groundwater management plans that still have groundwater overdraft. It cannot be assumed that these plans

will prevent groundwater overdraft and we have provided detailed information above regarding the inadequacy of groundwater management plans in the Sacramento Valley (see 2A-18 lines 22-30). Certainly, the provisions of SB X7 6 do not require groundwater management, only monitoring of groundwater.

3.4.3.2.3 Impact 3-3b: Substantially Change Water Supply Availability to Water Users That Use Delta Water- This section also fails to justify a finding of no significant impact. There is no actual analysis of how much Delta exports would be reduced or a calculation of how much "new" water would be created by new projects such as recycling or desalinization. Since it's clear that BDCP will actually INCREASE Delta exports through meeting "full contract deliveries" for CVP and SWP contractors, the finding may belie what the real impact of the Proposed Action will be once BDCP is incorporated into the Delta Plan.

In addition, the unsupported claim that, "The increase in groundwater levels could result in higher yields in nearby shallow wells and therefore be a benefit to shallow wells in some areas," leaves so much unsaid and unresolved, such as:

- How would this benefit shallow well owners that currently have healthy groundwater levels? Where would this potentially occur? Would a drop in levels by water transfers that use groundwater first harm other well owners before a potential, but highly unlikely, benefit may accrue?
- How would recharging the shallow aquifer assist wells that are in deeper levels of a confined or unconfined aquifer? Where is this likely to occur? Where is the acknowledgment of potential harm to these well owners?

The conclusion that the impacts would be less than significant is unfounded.

(3-91) 3.4.3.6 Mitigation Measures- There should be a mitigation measure to maintain adequate cold water carryover storage in CVP and SWP reservoirs to ensure providing cold water for fish to meet downstream temperature objectives and otherwise keep fish in good condition below dams in order to meet DFG Code Section 5937.

(3-94, lines 14-17) 3.4.4 No Project Alternative- The document fails to justify the finding that the Proposed Project will overall have less impacts than the No Action Alternative. The DPEIR fails to describe what the Proposed Project is and how it will affect various water resources issue areas such as groundwater, water quality and water supply. It assumes success without even describing in any detail what the Proposed Project is, let alone a quantitative analysis. How can a Peripheral Canal that takes water out of the Sacramento River before it gets to the Delta improve Delta water quality? How can meeting "full contract deliveries" for CVP and SWP customers not create impacts to Trinity River and Sacramento River salmon? Increased residence time and concentration of pollutants from the San Joaquin River into the Delta will clearly be a significant impact from the Proposed Action but the document does not disclose those impacts.

(3-98, lines 23-24)- The DPEIR makes an unsubstantiated finding that Alternative 2 has more water quality impacts than Existing Conditions, even though it states that under Existing Conditions there are many landowners who currently violate water quality standards and WDR's for drainage problem lands. The finding is based on an erroneous assumption that Alternative 2

includes more agricultural treatment facilities and is therefore a risk to water quality. As explained in other chapters, Alternative 2 would eliminate agricultural drainage polluted discharges because of land retirement and therefore agricultural drainage treatment plants are not necessary. Since Alternative 2 is actually superior to Existing Conditions or the Proposed Project, it is the environmentally preferred alternative for water quality.

(3-99, lines 8-9) 3.4.7.1.2 Impact 3-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge- Again the document incorrectly identifies that Alternative 2 has greater impacts than Existing Conditions (but less than the Proposed Project) because the DPEIR incorrectly assumes that Alternative 2 includes more emphasis on water transfers. Since Delta exports would be limited to 3 MAF/year, water transfers would unquestionably be less than Existing Conditions and therefore less impacts. Again, Alternative 2 is the environmentally preferred alternative.

3.4.7.1.3 Impact 3-3: Substantially Change Water Supply Availability to Water Users Located Outside of the Delta That Use Delta Water- It is probably correct that Alternative 2 has greater impacts to water users outside of the Delta (exporters) because it limits exports to 3 MAF, but it doesn't acknowledge that in-delta water users would benefit from increased freshwater flows through the Delta. However, the large number of projects under Alternative 2 to improve water supply reliability would fully mitigate for any water supply impacts, except for the elimination of water to 380,000 acres of drainage-impaired lands in the San Luis Unit. However, since those lands require substantial water, crop and drainage subsidies and will ultimately go out of production anyway due to salt buildup, it is actually a benefit to water quality, economics and the environment to eliminate water deliveries to poison lands.

Chapter 4, Biological Resources- (4-1). The Study Area does not include the Trinity River, even though it says it includes the watershed of Delta, including the Sacramento and San Joaquin basins. Since the Trinity is one of the sources of water for the Delta, it is inappropriate to leave it out, especially since some of the alternatives would retain existing Delta pumping or even increase Delta pumping- with resultant impacts to the areas of origin such as the Trinity. Trinity River Coho salmon are listed as a threatened species under federal and state law, but they aren't mentioned anywhere in the document. This is a significant omission. Even the South Delta Improvement Project DPEIR/DEIS did a temperature analysis on Trinity River salmon, albeit flawed.

Evaluation of impacts to Trinity River salmon and steelhead from the alternatives with high Delta exports such as Alternatives 1A and 1B could have been performed through evaluation of the frequency of violation of Trinity River Temperature Objectives Contained in the Water Quality Control Plan for the North Coast Region[55]. Such an evaluation is a standard procedure for evaluation of impacts to the Trinity River and has been used in several environmental documents such as the South Delta Improvement Project DEIS/EIR and the Trinity River Mainstem Fishery Restoration EIS/EIR. Additionally, the availability of water during extended drought to meet Trinity River Record of Decision flows while also meeting Basin Plan Temperature Objectives is a reasonable analysis that also was not completed.

There is no evaluation of impacts to the four races of Sacramento River Chinook salmon through

[55] See http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/083105-bp/04_water_quality_objectives.pdf page 3-8.00, footnote 5.

analysis of Sacramento River temperature objectives contained in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins[56]. Again, evaluation of the frequency of meeting the 56 degree F temperature objective and minimum carryover storage requirements for Shasta Reservoir contained in the NMFS Biological Opinion are common methods of quantitative analysis which were left out of this DPEIR.

4.3.2.2.4 (4-25)- Importance of the Delta to Water-birds- This section completely omits any references to Refuge Water Supplies contained in CVPIA. The DPEIR should indicate how the Delta Plan and BDCP will impact refuge water supplies and targets for restoration. It mentions that there are goals for wetland habitat in the Delta, but fails to mention what they are. How well each of the alternatives would meet those goals is an appropriate quantitative analysis that does not exist in this document.

Rice (4-38)- This section again fails to identify the CVPIA provision allowing for flooding of rice fields for winter migratory waterfowl habitat. It is as if this DPEIR does not acknowledge that CVPIA exists.

Shasta Dam to Red Bluff Diversion Dam (4-40)- This section mentions the Trinity River diversions to Clear Creek and the Sacramento River, but completely fails to mention that the Trinity River Record of Decision is supposed to limit those diversions. It also fails to mention that the Interior Department has a statutory and Tribal Trust obligation to the Hoopa Valley and Yurok Tribes[57] and their federally reserved fishing rights and an obligation to restore the Trinity River's fishery resources.

4.4.1 Assessment Methods (4-58)- The DPEIR states that:

> The Proposed Project (Delta Plan) and alternatives would not directly result in construction or operation of projects or facilities and therefore would result in no direct impacts on biological resources. The Proposed Project and alternatives could ultimately result in or encourage implementation of actions or development of projects, such as facilities or infrastructure, as described in Section 2A, Proposed Project and Alternatives.

It is a cop out to fail to describe potential impacts of approval of the Delta Plan and the BDCP that will be incorporated into the Delta Plan if certain statutory requirements that are rigged (such as DFG approval). Since the BDCP purpose, among other things, is to provide "full contract deliveries" to CVP and SWP contractors, the Delta Plan needs to do an analysis based on the impacts of full contract deliveries. That would include increased delivery of water and production of toxic agricultural drainage from the San Luis Unit and other lands in the western San Joaquin Valley, increased reservoir depletion for all CVP and SWP reservoirs, impacts to Trinity River fishery flows and temperatures, impacts to Sacramento River fishery flows and temperature objectives, impacts to American River temperatures and fishery flows, impacts to meeting Level 4 wildlife refuge water supplies, growth inducing impacts in urban areas, etc.

[56] See http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr.pdf, Table III-4, page III-8.00.
[57] See October 4, 1993 Interior Solicitor Opinion on Fishing Rights of Hoopa Valley and Yurok Tribes, located at http://www.schlosserlawfiles.com/~hoopa/SolOp_93.pdf

4.4.1 Assessment Methods (4-58)- The document uses the excuse that it's only a plan and therefore has no direct impact on biological resources is disingenuous. The policies and recommendations of the plan will result in changes in the physical environment, particularly when the BDCP is incorporated into the Delta Plan. At a minimum, the Delta Plan DPEIR should develop a range or impacts for BDCP based on the work done to date, such as the purpose and need to meet "full contract deliveries" for CVP and SWP contractors. The lack of specific analysis is unacceptable and does not meet the legal requirements of CEQA.

4.4.2 Thresholds of Significance (4-59)- Since there is no quantitative analysis of impacts to listed species or other listed, sensitive or otherwise protected species or habitats, it is impossible to determine if an impact is significant. One very clear threshold of significance that is not in the document is violation of water quality or air quality standards. For instance, if a particular alternative were to increase the number of violations of temperature objectives for the Trinity River or Sacramento River, it should be considered a significant impact. There are numerous water quality and air quality standards that should be considered but are not included.

Another example of a violation of specific plans and policies would be conflicts with the requirements of the Trinity River Record of Decision (2000). However, since the Trinity ROD is not mentioned or described in the DPEIR analysis, it is impossible to determine or describe conflicts. There are likely many other programs, Records of Decision, etc. that could be significantly impacted by the Delta Plan but are not mentioned. Again, the lack of specificity and quantitative analysis makes this document fatally flawed.

The Trinity River is protected from harm by diversions to the Sacramento River and Delta in numerous legal opinions, court decisions and administrative actions reflecting state and federal recognition of the Trinity's special legal status.[58] This special status creates a priority for the use of Trinity River water for Trinity River fisheries and other in-basin uses that is superior to any other use of CVP water outside of the Trinity River basin. Data in recent studies indicate that a small portion of flows originating from the Sacramento River reach interior South Delta compliance points, playing a role in salinity conditions there. Thus, Bureau of Reclamation water right permits for the Trinity River provide a portion of the water used to meet salinity objectives in the Delta as well export pumping supplies . However, current Bureau of Reclamation policies regarding the Trinity River Division operations make it clear that the Bureau does not recognize the Trinity River's special legal status. Reclamation's interpretation of the Trinity's legal status places salmon and steelhead fisheries and the overall health of the river's ecosystem and

58 See US Department of the Interior Memorandum by Solicitor Leo Krulitz to the Assistant Secretary, Land and Water Resources, Proposed Contract with Grasslands Water District, December 7, 1979, accessible online at http://www.c-win.org/webfm_send/156. Key federal authorities for doing no harm to the Trinity River include: The Trinity River Act of 1955 (PL 84-386); the Trinity River Basin Fish and Wildlife Restoration Act of 1984 (PL 98-541); Tribal Trust Doctrine, applied to the Hoopa Valley and Yurok Tribes; The Central Valley Project Improvement Act, PL 102-575 (CVPIA); Federal Reclamation Act (Section 8); Federal Clean Water Act Section 303; The 2000 Trinity River Record of Decision (page 17); and the 2000 Trinity River Biological Opinion by the National Marine Fisheries Service. State laws and policies on doing no harm to the Trinity River include: the Public Trust Doctrine; area of origin and watershed protection statutes in the California Water Code; California Department of Fish and Game recognition in environmental review comments concerning the Trinity River Mainstem Fishery Restoration Program; State Water Resources Control Board Order WR 90-05; North Coast Regional Water Quality Control Board and State Water Resources Control Board-approved temperature objectives for Trinity River, approved by US Environmental Protection Agency as Clean Water Act Section 303 standards.

economy at great risk.[59] The groups request that the Delta Plan include a policy statement in the Project Description that recognizes and extends protection, through amendment of the Bureau's water rights permits to the Trinity River, addressing salinity and flow objectives in the Delta as well as a limitation on the use of Trinity River water for Delta exports.

Proposed Mitigation Measure- SWRCB licensing of all rim dam reservoir to eliminate paper water and provide minimum instream fishery flows and requirements for temperature objectives through retention of cold water storage. The state and federal water contractors have previously made an argument against additional Delta outflows because of the need for more cold water upstream storage (to attempt to defeat additional Delta outflow) in the legislatively required flow hearings at the State Board. We agree this analysis should be done and the DSC CEQA document seems like the right place to do it.

Proposed Trinity River Mitigation Measure: - The following mitigation measure would ensure that no harm is done to Trinity River fisheries through implementation of the Delta Plan and BDCP:

The SWRCB shall convene a Trinity specific water right hearing, as directed in SWRCB Water Quality Order 89-18.[60] The water right hearing shall license Reclamation's eight Trinity River water permits as follows:

1. Conformance of Reclamation's eight Trinity River water permits with the minimum instream flows contained in the Trinity River Record of Decision.
2. Inclusion of permit terms and conditions to require Reclamation to comply with the Trinity River temperature objectives contained in the Water Quality Control Plan for the North Coast Region (NCRWQCB).
3. A requirement to maintain an adequate supply of cold water in Trinity Reservoir adequate to preserve and propagate all runs of salmon and steelhead in the Trinity River below Lewiston Dam.
4. Eliminate paper water in Reclamation's Trinity River water rights.

(4-62, lines 25-27)- This statement tries to make it sound like increased water transfers through the Delta would be good for the biological environment by repelling salt water. However, it fails to state that increased water transfers also means increased Delta pumping, South Delta water quality impacts, and mortality to fisheries from the Delta pumps, either directly or indirectly through take at the pumps and modification of flows and habitat.

[59] Letter of Paul Fujitani, Acting Operations Manager, US Bureau of Reclamation, to Brian Person, Chair, Trinity Management Council, Operating the Trinity River Division in Accordance with Water Rights Order 90-05 and Other Operational and Regulatory Objectives, February 23, 2011, accessible online at http://www.c-win.org/webfm_send/141. While USEPA maintains that Reclamation is required to comply with Trinity River Basin Plan Temperature Objectives for all project purposes, Reclamation does not agree. A February 23, 2011 letter by acting Central Valley Project Operations Manager Paul Fujitani to the Trinity Management Council stated, "We consider the Basin Plan to be objectives that we strive to meet, but do not consider the objectives as permit conditions."

[60] See: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1989/wq1989_18.pdf, page 18.

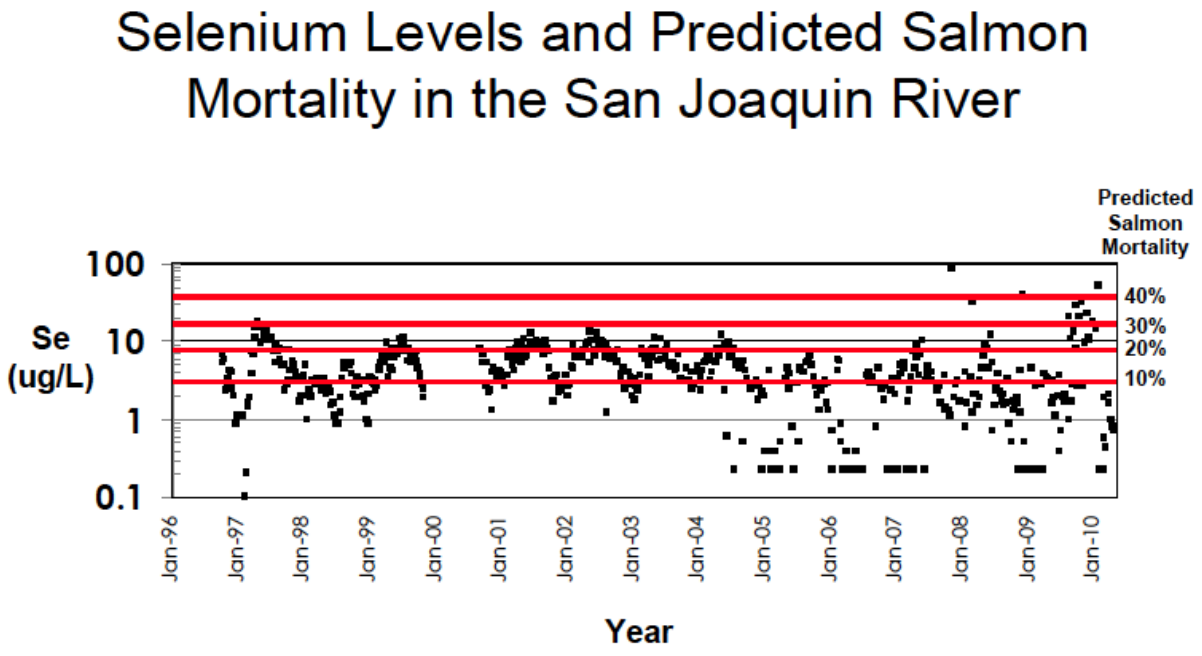
4-64/65 (end of page/top of second page)- Again, this tries to make water transfers look good by talking about increased flows in rivers going to the Delta, but it fails to identify adverse impacts to fish and water quality from increased Delta pumping associated with water transfers through the Delta.

Biological Project Impacts as a Whole- The DPEIR takes a conservative approach to most biological impacts by stating that project impacts are significant. However, most of these statements begin with something to the effect of: "Review of environmental analyses of similar projects suggests that these potentially significant impacts would be less than significant or mitigated to a less-than-significant level." Since the DPEIR does no quantitative analysis of each of the biological resource areas, the preceding statement is unsubstantiated, even if the final determination is a significant impact. Disclosure of the impact of the present CVP-SWP diversion system on the Bay/Delta ecosystem and public trust assets would make it impossible for this draft EIR to make the finding that "these potentially significant impacts would be less than significant or mitigated to a less than significant level."

4.4.3.3.2 Impact 4-2c: Substantial Adverse Effects on Special-status Species (4-74, lines 1-6)- The DPEIR makes the following statement in regard to impacts from treatment facilities such as ones proposed for treatment of selenium-contaminated agricultural drainage:

> The operation of facilities intended to improve water quality, such as discharges from wastewater treatment plants or the discharge of brine waste could adversely influence aquatic species if the discharges contained compounds or materials that produce direct toxicity or influence the aquatic food web. However, the discharges associated with any new facilities would be regulated by the SWRCB and RWQCBs to ensure compliance with existing water quality standards. Therefore, operation of these facilities would not be expected to produce significant impacts.

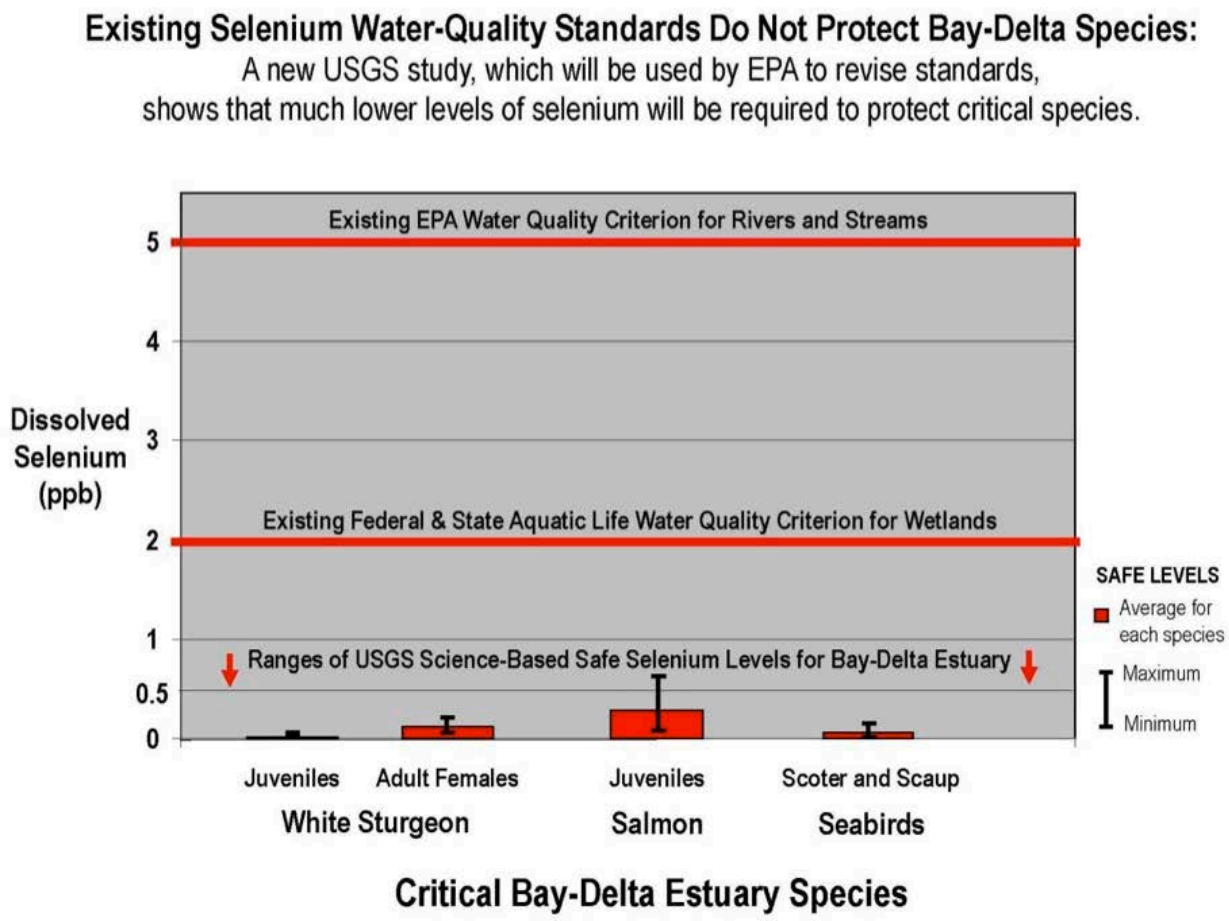
In the case of the Grasslands Bypass Project, enforcement of selenium water quality objectives in Mud Slough North and the San Joaquin River between Mud Slough and the Merced River have been waived until 2020, so the assumption is incorrect that the SWRCB and CVRWQCB will ensure compliance with existing water quality standards to protect aquatic resources. Existing selenium concentrations found in the San Joaquin River at Hills Ferry routinely exceed Basin Plan selenium water quality objectives and are inadequate to protect juvenile salmonids. See figure below.



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Additionally, the existing selenium water quality objectives are clearly inadequate to protect aquatic resources, as evidenced by the recent USGS Report[61] that indicates the existing Delta selenium water quality objective of 2 ppb should be reduced to no more than 0.5 ppb or even less in order to protect aquatic organisms and the species that feed on them. See figure below.

[61] Ecosystem-Scale Selenium Modeling in Support of Fish and Wildlife Criteria Development for the San Francisco Bay-Delta Estuary, California
By Theresa S. Presser and Samuel N. Luoma U.S. Geological Survey, Menlo Park, California. See http://www.epa.gov/region9/water/ctr/



Mitigation Measure 4.4 (4-86, lines 4-6)- In regard to alteration of flow patterns and water quality effects that could disrupt migratory cues for migratory aquatic species, it should specify that maintenance of adequate cold water storage behind the various rim dams (Shasta, Trinity, Folsom, Oroville, New Melones, Friant, etc.) is crucial to providing suitable spawning, incubating, rearing and migration of salmon, steelhead and other species.

(4-87, lines 10-15)- The document assumes that the Proposed Project will have less impact than No Project. However, since BDCP is to provide "full contract deliveries", it will entail greater Delta exports than the No Project Alternative, very likely through construction of a Peripheral "Chunnel" and possibly dual conveyance. The statement cannot be supported without full disclosure through qualitative analysis and an admission that increased Delta exports are possible once BDCP is incorporated into the Delta Plan.

Alternative 2 Analysis

(4-92, lines 31-32)- The finding is incorrect in that Alternative 2 would create less pollution as a result of agricultural treatment facilities. Instead, there would be a quantifiable improvement in water quality from savings in salt, selenium and boron mobilization from retirement of drainage problem lands. The permanent retirement of 380,000 acres of drainage impaired land in the San Luis Unit would decrease mobilization of selenium, salt, boron and other pollutants into the Grasslands Bypass Project and San Joaquin River, as well as the shallow and deep aquifers of the

western San Joaquin and Tulare basins. Based on analysis by the Bureau of Reclamation in the 2004 Broadview Water Contract Assignment Draft Environmental Assessment and Finding of No Significant Impact,[62] retirement of 10,000 acres in the Broadview Water District would result in the following reductions in pollutants to the Grasslands Bypass Project:

TABLE 4-1
DRAINAGE AND WATER QUALITY EFFECTS OF PROPOSED ACTION ON THE SAN JOAQUIN RIVER

	Existing Conditions	Under Proposed Action Conditions	Estimated Reduction Attributable to Proposed Action
BWD Drainage to San Joaquin River (afy)	3,700	1,100	2,600
BWD Estimated Salt Production (tons/yr)	24,300	7,300	17,000
BWD Estimated Selenium Production (lbs/yr)	2,140	640	1,500
BWD Estimated Boron Production (lbs/yr)	74,000	22,000	52,000

Source: Summers Engineering, 2003

Therefore, extrapolating the savings above, retirement of 380,000 acres of drainage impaired lands in the San Luis Unit would result in the reduction of 98,800 AF/year of contaminated agricultural drainage to surface water and groundwater, including a reduction of 646,000 tons of salt, 57,000 pounds of selenium and 1.976 million pounds of boron! Clearly, Alternative 2 cleans up significant sources of surface and groundwater pollution for the Delta and San Joaquin/Tulare basins and by far superior to any other alternative in this regard. The DPEIR does not disclose the magnitude of this improvement in water quality as a result of Alternative 2 because it lacks any quantitative analysis.

(4-93)- Alternative 2 does not have significant impacts to sensitive natural communities- The document incorrectly states that there will be significant impacts to sensitive natural communities (lines 21-21) compared to existing conditions because of the impacts of increased agricultural treatment facilities (although it gives no reason). As stated above, Alternative 2 does not contain agricultural treatment facilities because they would not be necessary if 380,000 acres of drainage problem lands in the San Luis Unit are retired. Therefore, Alternative 2 would not have significant impacts to sensitive natural communities as compared to Existing Conditions or the Proposed Project.

4.4.7.1.2 Impact 4-2: Substantial Adverse Effects on Special-status Species (4-93)- The DPEIR incorrectly assumes significant impacts from Alternative 2 compared to the Proposed Project and Existing Conditions because of an increase in agricultural drainage water treatment facilities. It also makes the nonsensical contradictory statement that:

"On balance, the temporary construction-related impacts under Alternative 2 would be greater than the Proposed Project because fewer projects would be constructed. In addition, the increased emphasis that Alternative 2 places on environmentally beneficial flows would likely contribute more to improving conditions for special-status species and arresting their decline.

[62] http://www.c-win.org/webfm_send/195, page 4-2.

Therefore, significant impacts on 4 special-status species under Alternative 2 would be *less than* under the Proposed Project."

Clearly, retirement of 380,000 acres and the huge reduction in selenium, salt and boron pollution, as well as establishment of instream flows and increased Delta outflows would vastly improve conditions for special status species and arrest their decline. The DPEIR makes incorrect and unsubstantiated findings in this regard in violation of CEQA's information disclosure requirements.

The same conclusions must also be made for **4.4.7.1.3 Impact 4-3: Substantial Reduction of Fish or Wildlife Species Habitat that** Alternative 2 does not create significant impacts compared to Existing Conditions or the Proposed Project.

The same conclusion also applies to **4.4.7.1.4 Impact 4-4: Interfere Substantially with the Movement of Any Native Resident or Migratory Fish or Wildlife Species or with Established Native Resident or Migratory Wildlife Corridors, and 4.4.7.1.5 Impact 4-5: Conflict with Any Local Policies or Ordinances Protecting Biological Resources or the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Protection Plan.**

Biological Resources Conclusion: Alternative 2 does not have significant impacts on biological resources compared to Existing Conditions or the Proposed Project. The huge reduction in creation of selenium, salt and boron pollution to surface and groundwater from cessation of irrigation of 380,000 acres in the San Luis Unit of the CVP makes Alternative 2 the environmentally superior alternative.

Chapter 5- Flood Risk

Overall, it is impossible to make a reasoned analysis of benefits or impacts to flood risk from the various alternatives in this chapter. For instance, there is no quantitative list of the number, size and cost of levee improvements included under the various alternatives. Alternative 2 should have clearly included a list of all levee work necessary to bring all Delta levees up to the PL 84-99 standard as stated in EWC correspondence on the fifth draft of the Delta Plan. Instead, the DPEIR incorrectly portrays Alternative 2 as "Actions to reduce flood risk under Alternative 2 would emphasize floodplain expansion and reservoir reoperation rather than levee construction and modification."

Specific impact analysis is put off until subsequent environmental documents. There is no discernable difference between No Action and the Proposed Action in terms of flood risk. No reasoned analysis can be made from the alternative descriptions, analysis and discussion in this chapter. Based on changes to accurately reflect the EWC's Alternative 2, Alternative 2 would have less impacts and more benefits than the Proposed Action in relation to flood risk.

Figure 5-3 is the wrong map. It is supposed to be the San Joaquin River Flood Control Project but instead it shows the Sacramento River Flood Control Project, the same as Figure 5-2.

5.4.7.1.1 Impact 5-1 (5-76)- We disagree that Alternative 2 would have greater impacts on drainage pattern alteration than the Proposed Project because Alternative 2 does not contain ocean desalination projects or agricultural drainage treatment facilities, but it does include

significant levee improvements by bringing all levees up to the PL 84-99 standards. Therefore, Alternative 2 would have the least impacts and certainly less impacts than the Proposed Project.

5.4.7.1.2 Impact 5-2 (5-77)- We agree that Alternative 2 would have less impacts than the Proposed Project for alteration of drainage patterns and polluted surface runoff.

(5-78) 5.4.7.1.5 Impact 5-5: Place Within a 100-year Flood Hazard Area Structures Which Would Impede or Redirect Flood Flows, or Inundation by Seiche, Tsunami, or Mudflow- We agree that "Overall, significant impacts associated with placement of structures within a 100-year flood hazard area under Alternative 2 would be **less than** under the Proposed Project."

Chapter 6- Land Use and Planning

Overall, this section doesn't say much. In regard to comparisons of impacts between the Proposed Project and Alternative 2, it assumes equal or greater impacts from Alternative 2, especially for the impact related to conflicts with applicable land use plans, policies, regulations, or land use restrictions from construction and operations (page 6-71, lines 5-7). This is largely from water conservation, recycling and the erroneous assumption that there would be more agricultural drainage treatment facilities. If anything, Alternative 2 should be equal or lesser impacts than the Proposed Project especially when one considers that the Proposed Project will ultimately include a Peripheral Canal or Tunnel that will have very significant impacts on Delta communities from a land use perspective- turning large acreages from agriculture to the environment as well as right of way for the Chunnel and its construction footprint (which is not disclosed).

Chapter 7 - Agriculture and Forestry

(7-62/63)-Alternative 2 Conversion of Farmland to non-agricultural use- This section mischaracterizes the Environmental Water Caucus' (EWC) Alternative 2. The EWC merely recommended consideration of a feasibility study of surface storage for the Tulare Lake Basin. The EWC also did not recommend ocean desalination or an increase in the number of agricultural drainage treatment facilities. The 380,000 acres of farmland recommended for retirement by the EWC will ultimately go out of production anyway because there is no viable cost effective technology to deal with the problem of toxic drainage from the San Luis Unit of the CVP.

Additionally, the Proposed Project will also include a significant amount of farmland conversion for the footprint of the Peripheral Canal or Tunnel being proposed by BDCP, in addition to required mitigation acreage. Given that impact and the above changes to Alternative 2, Alternative 2 should have the same or less impact on conversion farmland to non-agricultural use.

We agree that Alternative 2 has less impacts on agriculture than the Proposed Project for impacts 7-2 (Zoning for Ag use or Williamson Act lands), 7-3 (Loss/conversion of forestland), 7-4 (Zoning conflicts w/forestland) and 7-5 (Other changes to farmland/forest land).

Chapter 9 - Air Quality

This section, similar to the chapter on Climate Change and Greenhouse Gas Emissions (Chapter 21), fails to identify the air quality impacts from the energy demands of reverse osmosis for

agricultural drainage treatment and pumps to move water. Given that the Proposed Action includes an isolated delta conveyance facility that will likely increase pumping to South of Delta contractors, and increase the distance to pump the water, clearly there will be significant energy impacts from the Proposed Action that are not identified.

Alternative 2 without agricultural drainage treatment facilities and ocean desalination, would clearly be less energy intensive for ongoing maintenance and operation, thereby reducing the burning of fossil fuels such as coal which cause emissions of pollutants and greenhouse gases. Alternative 2 is therefore the environmentally preferred alternative.

Chapter 10 - Cultural Resources

Overall, this chapter is severely lacking in references to the Interior Department's tribal trust obligations to the Hoopa Valley and Yurok Tribes and their federally reserved fishing rights. Those obligations are spelled out in an Interior Solicitor's Opinion from 1993 (M-36979).[63] Nowhere in the entire document are those rights and obligations mentioned, nor are the names of the two Indian Tribes who have those special rights linked to a division of the Central Valley Project, unique in California. For instance, the Bureau of Reclamation releases water from Trinity and Lewiston Dams into the Trinity River for the Hoopa Valley Tribe's White Deerskin Boat Dance on odd-numbered years sometime near the end of August. That is a cultural religious ceremony flow directly plumbed to the CVP, but is nowhere mentioned in this document. The DPEIR is deficient in not addressing the existence of these tribal rights and flows, let alone impacts to them from the various alternatives.

Overall, since Alternative 2 would allow the smallest Delta exports (no more than 3 MAF/year), it would have the least impact on the Tribal Trust/cultural resources of the Hoopa Valley and Yurok Tribes because it would leave the largest amount of water in Trinity Reservoir to meet downstream temperature and flow requirements to fulfill Interior's tribal trust obligations.

Since the document and Proposed Project do not disclose actual construction projects like the Peripheral Canal, it is impossible to disclose or evaluate impacts to cultural resources from construction activities. In general it does find significant unavoidable impacts to various cultural resources from the Proposed Project and all alternatives, but specifics are severely lacking. The Proposed Project has greater impacts on cultural resources than any of the other alternatives, which is significant. The Proposed Project is not compared to Existing Conditions, even though the other alternatives are. It is disingenuous for them to not include a general map of the proposed Chunnel sites that BDCP is considering for the proximity to known sites of significance. The DPEIR could have had a lot more detail.

(10-23)- Thresholds of significance- The DPEIR fails to mention that impacts to extant cultural and religious ceremonies of Tribes such as Winnemem Wintu, Hoopa Valley and Yurok should be considered a significant impact (puberty ceremony, white deerskin boat dance, etc.). For instance, a lack of water in Trinity Reservoir might prevent the Bureau of Reclamation from releasing water into the Trinity River for the Hoopa Valley Tribe's White Deerskin Boat Dance.

(10-25) 10.4.3.1.1 Impact 10-1a: Disturbance or Destruction of Prehistoric and Historic-Era Archaeological Resources- The DPEIR fails to identify increased reservoir drawdown from the

[63] See http://www.doi.gov/solicitor/opinions/M-36979.pdf

Proposed Project to meet "full contract deliveries" to CVP and SWP contractors. The resulting reservoir drawdown will result in increased exposure of historical resources now within the inundation areas of major reservoirs such as Shasta, Trinity and Oroville. Overall this section is a cop out, as there are known routes for the PC that are part of BDCP. The DPEIR pretends that those plans and maps don't exist through BDCP! The DPEIR could have, at a minimum, shown a potential range of locations for the Chunnel with a numerical status of potentially affected known historic or prehistoric sites in the vicinity and severity of expected impacts (how many might be totally removed/destroyed because they are in the direct path of the "facility"?).

The same logic above applies to several other impacts to cultural resource sites, historic buildings human remains, etc.- Impacts 10-1a, 10-2a, 10-3a and 10-4a.

Chapter 14- Hazards Hazardous Materials

Overall, this chapter overestimates the hazmat impacts from Alternative 2 under the incorrect assumption that the EWC alternative includes increased construction and use of ocean desalinization and agricultural drainage treatment facilities and therefore greater exposure (greater impacts) compared to the Proposed Project. Alternative 2's reduction in selenium, salt and boron production and elimination of the need for agricultural pollution treatment facilities more than offsets hazmat impacts from increased recycling and sewage treatment facilities compared to the Proposed Project. Using information from the Broadview Contract Assignment Draft Environmental Assessment (Reclamation, 2004), extrapolating the savings from retirement of 380,000 acres of drainage impaired lands in the San Luis Unit would result in the reduction of 98,800 AF/year of contaminated agricultural drainage to surface water and groundwater, including a reduction of 646,000 tons of salt, 57,000 pounds of selenium and 1.976 million pounds of boron! Clearly, Alternative 2 cleans up significant sources of surface and groundwater pollution for the Delta and San Joaquin/Tulare basins and is by far superior to any other alternative in this regard. The DPEIR does not disclose the magnitude of this improvement in hazardous material production, storage, transport and disposal, as a result of Alternative 2 because it lacks any quantitative analysis. Alternative 2 is environmentally superior for Hazards and Hazardous Materials.

This chapter also substantially fails to estimate the INCREASE in disease vectors (mosquito habitat) by delivery of more water from the Delta and increased reliability of water to south of Delta agricultural water contractors. Alternative 2 would have substantially less impact for disease vectors compared to Existing Conditions and the Proposed Project because of the permanent retirement of 380,000 acres in the San Luis Unit of the CVP and a limit on Delta exports to 3 MAF, which is less than any other alternative. (note- we may not want to mention it but increased urban water supply reliability through reinstatement of the SWP urban water preference may slightly increase mosquito habitat in urban areas served by the SWP.)

Alternative 2 is clearly the environmentally preferred alternative in regard to hazards and hazardous materials.

14.3.4- Methyl Mercury (14-4)- There should be a similar section for selenium (14.3.5), as it is a hazardous material and is mobilized into the food chain by irrigated agriculture in the WSJV, which the proposed project through BDCP will increase to "full contract deliveries" and resultant increase in selenium contamination of SJR, aquifers and SF Bay Delta Estuary. Selenium is a significant issue because Alt 2 would effectively reduce this amount to zero from agricultural lands by retiring 380,000 acres in San Luis Unit- an improvement compared to existing

conditions or the Proposed Project. The document should discuss sources of selenium and the SLDFR and GBP efforts to create selenium collection/concentration facilities and compare to Alt 2 where no agricultural selenium pollution is created due to ending irrigated agriculture on drainage problem lands.

14.4.3- Other areas in CA (14-15)- This section should include areas such as Westlands/Grasslands/San Luis Unit drainage problem/toxic lands. Ending irrigation of these lands will significantly reduce creation and need for treatment of seleniferous toxic pollution from agricultural lands and subsequent exposure to humans and environment from this hazardous material. Also Table D-1 indicates a monthly mean 15 ppb interim performance goal for selenium. Under the Clean Water Act, there are no "interim performance goals." The GBP is not meeting state or federal selenium standards. The EPA Toxics rule was adopted in 2000, not 1992 yet USEPA has yet to comply with the law. The adopted EPA standard is 5 ppb 4 day moving average. As noted elsewhere in these comments, USGS has determined the selenium criteria for the Bay-Delta needs to be revised 50x less to protect aquatic species.

(14-17)- Proposed Project – Reliable water supply 14.5.3.1- The DPEIR does not disclose the amount of agricultural drainage treatment facilities that will be constructed for the Proposed Project (which is contained in the SLDFR EIS and ROD, Reclamation, 2007), which is actually greater than Alternative 2. There will be a substantial amount of toxic drainage created by Proposed Project, especially if BDCP purpose and need to provide "full contract deliveries" is fulfilled, and therefore there is a need for treatment facilities and associated risks to exposure from hazardous selenium, as well as other harmful substances extracted in planned treatment facilities. These impacts are fully mitigated in Alternative 2 by not allowing irrigation of the 380k acres and reduced Delta exports and increased urban water supply reliability for SWP, which decreases water deliveries to toxic lands in SWP service area in Western Tulare and Kern basins.

The same comment above applies to **14.5.3.1.1 Impact 14-1a** for the proposed project **(pages 14-17 to 14-19).**

(14-20) 14.5.3.1.3 Impact 14-3a: Create Vector Habitat That Would Pose a Significant Public Health Hazard- This section fails to identify that the Proposed Project would increase impacts due to providing "full contract deliveries" to CVP and SWP agricultural contractors south of the Delta and therefore increases creation of standing water for mosquito breeding and disease vectors. Again, Alternative 2 has reduced impacts due to reinstatement of the SWP urban water preference taking water away from Ag in SWP service areas and elimination of irrigation of 380,000 acres in San Luis Unit of CVP.

(14-26) 14.5.3.3 Water Quality Improvement- This section should include descriptions of the Grasslands Bypass Project, Panoche Demonstration Selenium Treatment Plan and SLDFR treatment systems/plants in the list of projects at the bottom of 14-26/top of 14-27. This is a significant omission that results in falsely making the Proposed Project superior in impacts to Alternative 2 where there are no such treatment plants needed for selenium contamination of agricultural runoff but the document mistakenly says there are.

(14-27) 14.5.3.3.1 Impact 14-1c: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials or Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of

Hazardous Materials into the Environment- There needs to be a description of what exactly are the technologies and costs of the CV Salts program (lines 17-18) and how much hazardous materials it is expected to produce. Lines 23-24 should describe the alternative conveyance that the BDCP is expected to result in construction of (Chunnel).

(14-28) 14.5.3.3.2 Impact 14-2c: Impact 14-2a: Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code, Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment- This section makes a statement that the GBP EIS/EIR stated that there were no impacts from hazardous materials, making it appear that there are no hazardous material issues related plans to deal with toxic drainage from continued irrigation of the San Luis Unit (380,000 acres) under the Proposed Project and all alternatives other than Alternative 2. However, the GBP EIS/EIR did not include evaluation of selenium treatment facilities. The more recent Panoche Demonstration Selenium Treatment Plant Draft EA/FONSI states that 55,000 lbs. of hazardous waste annually will be created from this small demonstration project and will need to be transported to a Class 1 hazardous waste facility such as Kettleman City. It is important to note that the San Luis Drainage Feature Re-Evaluation (SLDFR) EIS and ROD (Reclamation 2007) are not even mentioned in the Delta Plan DPEIR. Furthermore, the SLDFR EIS and ROD contain no mention or analysis of hazardous materials. However, according to USGS Open File Report 2008-1210[64] the waste pile from implementing the SLDFR alternative with the existing condition of 100,000 acres of land retirement would create a selenium contaminated waste pile of 311 acres one foot deep per year. That is the equivalent of 412,000 tons a year, or 13.24 million cubic feet. Many of those wastes will contain hazardous waste concentrations of selenium (over 1,000 ug/l). Over the fifty year life of the project, it would create a pile of salts and selenium 50 feet high covering 311 acres (662 million cubic feet or 20.6 million tons of material). This is a significant amount of hazardous waste that from Existing Conditions and the Proposed Project that would not exist under Alternative 2.

(14-36) 14.5.3.6.1 Mitigation Measure 14-1- The mitigation measure to use BMP's to prevent spills, etc. would be needed more for Proposed Project than Alt. 2 because there are many less toxic substances created by cessation of irrigation of the San Luis Unit by 412,000 tons/year.

(14-45)- General description of Alternative 2- Incorrectly states more agricultural drainage treatment and ocean desalination facilities. Therefore, Alternative 2 would involve less facilities that would use or create hazardous materials than the Proposed Action.

(14-45) 14.5.7.1.1 Impact 14-1: Create a Significant Hazard to the Public or the Environment Through the Routine Transport, Use, or Disposal of Hazardous Materials or Through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment- This discussion erroneously says that Alternative 2 has more impacts than the Proposed Project (or existing conditions). It fails to recognize that under Alternative 2, there is no need for treatment of agricultural drainage treatment facilities. Alternative 2 has less impacts than Proposed Alternative and is much less than Existing Conditions because Existing Conditions includes irrigation of 280,000 acres (380,000 acres minus 100,000 acres already retired) in San Luis Unit that aren't included in Alternative 2.

There will be less selenium, boron and salt toxic drainage created than Existing Conditions or

[64] http://pubs.usgs.gov/of/2008/1210/of2008-1210.pdf page 27-28

Proposed Action which both have less land retirement than Alt. 2.

(14-46)- 14.5.7.1.3 Impact 14-3: Create Vector Habitat That Would Pose a Significant Public Health Hazard- This section incorrectly concludes Alternative 2 would create more vector habitat than the Proposed Project or existing conditions. However, since Alternative 2 has less water going to Agriculture south of delta due to land retirement and a limit on exports to 3 MAF, there would be less vector habitat created. Again, Alternative 2 is environmentally preferred because it creates less vector habitat than existing or Proposed Action or any other alternative.

Chapter 18 - Recreation

(18-52)- Alternative 2 does not include construction of additional agricultural drainage treatment facilities or ocean desalination facilities, therefore, there would be less impacts to recreation than the Proposed Project. We agree that Alternative 2 would have less impacts to recreation than the Proposed Project in relation to impairment or degradation of recreational facilities and activities. However, because Alternative 2 would improve water quality, Delta flows and fish populations, we disagree that it would have significant impacts compared to Existing Conditions in relation to degradation of recreational facilities and activities.

(18-53)- We agree that Alternative 2 would have less impacts on physical deterioration of recreational facilities, but we disagree that it would have significant impacts compared to Existing Conditions. Improved water quality in the Delta, including improved freshwater flows would decrease salt in the Delta compared to Existing Conditions, and that alone would decrease the ongoing deterioration of Delta recreational facilities such as marinas, boats, etc.

We agree that Alternative 2 would have less impacts than the Proposed Project for construction or expansion of recreational facilities.

Chapter 22 - Cumulative Impacts

Water Resources and Biological Resources- Trinity River- The Trinity River Record of Decision, which is not mentioned anywhere in the DPEIR analysis includes, among other things, a 474,000 AF increase in Trinity River instream flows compared to Reclamation's existing Trinity River water permits that have a minimum instream flow of only 120,500 AF. Fulfillment of "full contract deliveries" per the BDCP Purpose and Need will cumulatively impact the Trinity River and cold water storage in Trinity Reservoir necessary to meet the federal fishery restoration goals for the Trinity River. See Biological Resources discussion on Trinity River for more detail and mitigation measures.

22-3- Groundwater resource impacts (lines 36-39). The document incorrectly states that impacts to groundwater resources will be less than significant for the Proposed Project because of "the likelihood of overall beneficial effects." This assumes that groundwater management plans will adequately protect groundwater resources, which is incorrect in that some plans still allow overdraft and aquifer compaction/settling.

North Coast Wild and Scenic Rivers- The cumulative impact of the Delta Plan, once BDCP is accepted into the plan, will create political pressure to un-designate California's North Coast Rivers from Wild and Scenic River protections (Trinity, Eel, Klamath and Smith rivers). The

BDCP's purpose and need to provide "full contract deliveries" to SWP and CVP customers cannot be met without diverting North Coast Rivers currently protected under Wild and Scenic designations. The State Water Project was premised on damming the Eel River and diverting it to a Peripheral Canal. The state designation of North Coast Wild and Scenic Rivers including the Eel by Governor Ronald Reagan (1972) and the federal designation by Interior Secretary Cecil Andrus in 1981 halted plans to provide millions of additional acre-feet to the CVP and SWP. As noted in the SWRCB's Bay-Delta Outflow Report, it is clear that existing Delta exports are harming the ecosystem. Increased exports through "full contract deliveries" to Delta exporters would clearly require a significant source of water not currently available, thereby creating political pressure to un-designate North Coast Wild and Scenic Rivers.

Water Resources- While the DPEIR project area includes the Trinity River and Delta tributary rivers and streams, there is no cumulative analysis of water quality or water quantity impacts to rivers/areas of origin. As stated in our comments on Chapter 3, an analysis of impacts to the Trinity River, Sacramento River and other rivers should have been completed. The ability to meet temperature and other water quality objectives as well as the ability of the various alternatives to meet prescribed flow regimes to protect Public Trust resources should have been conducted but was not.

The lack of quantifiable information on the Proposed Project's Delta outflows, instream flow regimes, water quality standards and other water resource information completely fails to disclose any cumulative impacts to water resources. Since the BDCP will include plans to increase Delta exports and construct a Peripheral Canal/Tunnel, it is logical to assume significant impacts to a variety of water resources, but this DPEIR completely fails to disclose anything. However, it is obvious that Alternative 2 would have less cumulative impacts to water resources than the Proposed Action.

There is overall no credible cumulative impact analysis for any issue area. Given the misrepresentations in Alternative 2, clearly Alternative 2 has less individual and cumulative significant impacts than the Proposed Action or any other alternative considered.

Chapter 24 - Other CEQA Considerations

There is not enough information in the DPEIR to make a reasoned analysis of other CEQA considerations. Given that there is no water availability or economic analysis in the DPEIR, it is impossible to tell what growth inducing or other impacts are likely.

Chapter 25 - Environmentally Preferred Alternative

Overall this chapter states that the Proposed Project is the environmentally preferred alternative. Alternative 2 comes in second largely because of the large amount of land retirement of drainage problem lands (380,000 acres) and the re-creation of Tulare Lake (320,000 acres). However, it is important to note that the agricultural drainage-impaired land going out of production will ultimately go out of production anyway because there is no cost effective or technologically-effective solution other than to take that land out of production. The huge impacts of salt, selenium, boron and other pollution resulting from continued irrigation of those lands until they ultimately salt up is far worse for the environmental "losses" of taking the land out of production sooner rather than later under Alternative 2.

Water Resources
We agree with the finding that Alternative 2 would have less impacts than the Proposed Project or other alternatives on water resources. While Alternative 2 would have impacts to water supply reliability for the western San Joaquin Valley from reduced Delta diversions, it would dramatically improve water supply reliability for urban areas which rely on Delta exports BECAUSE of the reduced agricultural water deliveries to poisoned lands and reinstatement of the urban preference in SWP contracts. Water quality for Delta farms would be improved. Groundwater supplies and quality north of the Delta would also be better protected under Alternative 2 than the Proposed Project because of the limitation on Delta exports that would limit north to south groundwater transfers that could negatively impact Sacramento Valley groundwater. The construction of more recycling and local water supply projects will also help mitigate negative impacts from Alternative 2's limitations on Delta exports. Alternative 2 is therefore the environmentally preferred alternative.

Biological Resources
We agree with the finding that Alternative 2 would contribute more to improving conditions for biological resources and arresting ecosystem decline than the Proposed Project, primarily because of its more rigorous pursuit of flow objectives that protect the environment and public trust resources. Furthermore, Alternative 2 would greatly improve water quality in the Delta and San Joaquin River by permanent retirement of 380,000 acres of toxic lands, a portion of which currently discharges highly toxic selenium, salt, boron and other pollutants into the San Joaquin River through the Grasslands Bypass Project. Because it limits Delta exports, Alternative 2 would also have less impacts on the Trinity River, Sacramento River and rim reservoir cold water storage for downstream fish protection.

Delta Flood Risk
We disagree that the Proposed Project would have less flood risk impacts than Alternative 2. Alternative 2 has been misrepresented in terms of providing improved levees in the Delta. Alternative should include the Environmental Water Caucus' position that all levees be upgraded to core levees above the PL 84-99 standard, in accordance with the recommendations of the Delta Protection Commission. This action is superior to the Proposed Project. If supported by the Delta Stewardship Council, this action would significantly reduce Delta earthquake and sea level rise vulnerabilities, putting Alternative 2 on a par with the Proposed Project (CEQA Guideline 15126.5, Discussion of Alternatives). Alternative 2 is therefore the environmentally preferred alternative for flood risk.

Land Use and Planning
We agree that the Proposed Project would have the greatest potential to conflict with local land use policies and plans. Since Alternative 2 would have the smallest number of projects constructed compared to any other alternatives, it is the environmentally preferred alternative for conflicts with Land Use and Planning.

Visual Resources
We disagree that Alternative 2 would have more impacts than the Proposed Project in regard to visual impacts. The DPEIR incorrectly assumes that Alternative 2 includes desalination projects and agricultural drainage treatment facilities. Since Alternative 2 does not include significant new infrastructure such as a Peripheral Canal, it should have less visual impacts. Therefore, Alternative 2 is the environmentally preferred alternative in regard to visual resources.

Air Quality
We disagree that Alternative 2 would have greater air quality impacts than the Proposed Project. The DPEIR incorrectly assumes that Alternative 2 includes desalination projects and agricultural drainage treatment facilities. Since Alternative 2 does not include significant new infrastructure such as a Peripheral Canal, it should have less air quality impacts. Reduced Delta exports would also translate directly into decreased use of fossil fuels for electrical generation to meet Delta pumping demands. Land retired under Alternative 2 could be revegetated such that dust impacts could be fully mitigated. Therefore, Alternative 2 is the environmentally preferred alternative in regard to air quality, especially after mitigation for dust from retired agricultural lands.

Cultural Resources
We agree that all alternatives other than the Proposed Project would have less impacts to cultural resources. However, Alternative 2 rises to the top as having the least cultural impacts because it reduces Delta pumping demands, which in turn reduces the following cultural impacts:

1. Reduced drawdown of CVP and SWP reservoirs, thereby reducing exposure of historical resources that are normally submerged under the reservoirs.
2. Increased water availability for cultural water flows such as the Hoopa Valley Tribe's White Deerskin Boat Dance.
3. No raising of Shasta Dam, thereby preserving remaining cultural sites of the Winnemem Tribe such as Puberty Rock.

Therefore, Alternative 2 is the environmentally preferred alternative for cultural resources.

Geology and Soils
We agree that the Proposed Project has the most construction impacts and therefore the largest impact on this resource compared to all other alternatives. Alternative 2 has the least amount of construction projects and is therefore the environmentally preferred alternative for geology and soils.

Paleontological Resources
We agree that Alternative 2 and No Action have the least impacts to paleontological resources because they have the least construction activities. Therefore, Alternative 2 is the environmentally preferred alternative for paleontological resources.

Mineral Resources
We disagree that Alternative 2 would have the same impacts on mineral resources as the Proposed Project. Alternative 2 has less construction activities and would therefore have less impacts to mineral resources than the Proposed Project. Therefore, Alternative 2 is the environmentally preferred alternative for mineral resources.

Hazards and Hazardous Materials
We disagree that Alternative 2 would have similar hazardous materials impacts as the other alternatives. Only Alternative 2 eliminates delivery of clean water to poison ground. Elimination of irrigation water to 380,000 acres of drainage impaired lands in the San Luis Unit of the CVP would reduce the creation of hazardous waste containing selenium, salt, boron and other contaminants.

We also disagree that Alternative 2 would increase vector-related hazards from construction of wetland and habitat restoration projects. To the contrary, plans to continue to irrigate 380,000 acres of land in the San Luis Unit and 320,000 acres in the Tulare Basin increases the risk of ponding water in agricultural areas that could create disease vector habitat.

The irrigation of toxic soils also poses a problem for endangered species such as the Giant garter snake and others as the selenium concentrates up the food chain.

Therefore, Alternative 2 is the environmentally preferred alternative for hazards and hazardous material resources.

Noise
We disagree that Alternative 2 would have greater impacts because of ocean desalination facilities in urban areas. Alternative 2 does not include ocean desalination facilities and has less construction than the Proposed Project. Therefore, Alternative 2 is the environmentally preferred alternative for noise.

Population and Housing
We disagree that Alternative 2 has population and housing impacts/demands similar to the other alternatives. Since Alternative 2 has less construction activities than the Proposed Project, it should have less impacts on population and housing. Therefore, Alternative 2 is the environmentally preferred alternative for population and housing.

Public Services
We agree that all alternatives have similar minimal impacts on public services.

Recreation
We agree that Alternative 2 has less impact to recreational facilities than the Proposed Action. Given the California budget mess and the fact that State Parks are closing, it is absurd for the Delta Plan to realistically think that new recreational facilities will be constructed and maintained in the Delta. Alternative 2 would improve the Delta ecosystem and fishing recreation by increased Delta outflows and improved water quality. Therefore, Alternative 2 is the environmentally preferred alternative for recreation.

Transportation, Traffic and Circulation
We agree that Alternative 2 would have less construction activities and therefore has less impacts on transportation, traffic and circulation. Therefore, Alternative 2 is the environmentally preferred alternative for transportation, traffic and circulation.

Climate Change and Greenhouse Gas Emissions
We disagree that Alternative 2 would have equal Greenhouse Gas Emissions (GHG) to the proposed project. The DPEIR erroneously assumes that Alternative 2 includes ocean desalination plants and reverse osmosis facilities to treat agricultural drainage. Since Alternative 2 should not include those 2 types of facilities, it will create less GHG's from energy generation for both pumping and other facility operation. Therefore, Alternative 2 is the environmentally preferred alternative for Climate Change and GHG.

Environmentally Preferred Alternative

An argument was previously made in these comments that the 380,000 acres of drainage impaired lands scheduled for retirement in Alternative 2 will go out of business anyway due to salt and boron buildup in the soils in comments on Chapter 2A. In all other areas, as demonstrated above, Alternative 2, as corrected, would be the environmentally preferred alternative.[i]

CONCLUSION

For all of the above mentioned reasons, this draft EIR should be withdrawn, rewritten, and recirculated consistent with these comments and the comments submitted by the Law Offices of Rossmann & Moore, the Law Offices of Stephan Volker, Lozeau Drury, Lewis Brisbois Bisgaard & Smith LLP, the South Delta Water Agency, and the Environmental Water Caucasus, as incorporated herein by reference.

Respectfully submitted February 2, 2012

s/ MICHAEL B. JACKSON

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[i] [i] References cited throughout:

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